HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Installation Guide

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Contents

About This Guide

This guide provides detailed information for installing the Rapid Deployment Pack—Linux Edition. It describes the process for pre-deployment configuration of the Altiris Deployment Server for Linux and the provided Linux scripted-install jobs and installation files. Instructions for upgrading the Deployment Server and NFS server with new versions of software are also provided.

Audience Assumptions

To install and configure the Rapid Deployment Pack, it is assumed that you have knowledge of:

- Installing Linux either from CD or by means of a network
- Basic Linux command line interface operations (for example, mounting and unmounting floppy and CD-ROM drives, creating directories, and copying files)
- Network infrastructure

To perform tasks after the installation is complete, it is assumed that you have knowledge of editing files within Linux and running scripts under Linux.

Related Documents

HP recommends reviewing the following documentation before reading this guide:

- The *HP ProLiant Essentials Rapid Deployment Pack Planning Guide* provides information about how to best use the Rapid Deployment Pack as a server deployment solution. Review this document before beginning the software installation.
- The *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix* for your Rapid Deployment Pack version details which servers and operating systems are supported for deployment.

HP recommends reviewing the following documentation after reading this guide:

- The *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition User Guide* provides information on using the Rapid Deployment Pack as a server deployment solution. It describes the directory structure and files provided with each Rapid Deployment Pack component along with their respective uses and provides example deployments.

All of the documents can be found at http://www.hp.com/servers/rdp, on the product CD in .pdf format under /pim-lds/docs, and on the Deployment Server after the Rapid Deployment Pack installation under /opt/altiris/deployment/adlserver/docs.

Where to Go for Additional Help

Online Resources

- HP ProLiant Essentials Rapid Deployment Pack website at http://www.hp.com/servers/rdp
- HP ProLiant Essentials Rapid Deployment Pack Knowledge Base at http://www.hp.com/servers/rdp
- *ITRC User Forum "ProLiant Deployment, Provisioning (RDP, SmartStart)"* at http://forums.itrc.hp.com
- Altiris website at http://www.altiris.com

Telephone Numbers

For the name of your nearest HP authorized reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.

For HP technical support:

- In the United States and Canada, call 1-800-652-6672.
- Outside the United States and Canada, refer to http://www.hp.com.

1

Licensing

Overview

This chapter describes the licensing options available for use with the Rapid Deployment Pack as a server deployment solution and how to purchase, install, and add licenses.

A license allows a server to be deployed and managed by the Altiris Deployment Server for Linux. One license is required for each server being managed. After a license is applied to a specific server, the license cannot be removed or transferred to another server.

A license file contains licenses for a predetermined number of servers. License files are applied without reference to the Rapid Deployment Pack version and are not specific to Rapid Deployment Pack—Windows Edition or Rapid Deployment Pack—Linux Edition, as long as the one license per server requirement is met.

Licensing Options

The Rapid Deployment Pack offers five licensing options:

- **One-node license**—Use this license to deploy and manage deployment of one server through the Deployment Server.
- **10-node license**—Use this license to enable and manage deployment of 10 servers through the Deployment Server.
- **Flexible Quantity license**—Flexible Quantity license kits are available to obtain an exact quantity of licenses in the purchase of a single software option kit.
- **Activation Key Agreement**—This option provides the ability to order a key in the quantity desired and for a specific time and purchase a license for each server deployed over time.
- Licenses are also bundled with blade enclosures.

For more information about Flexible Quantity and Master licensing options, refer to the ProLiant Essentials Licensing Options at http://www.hp.com/servers/rdp.

Obtaining Licenses

Evaluation Licenses

Two types of evaluation licenses are available for use:

- A 10-node, seven-day evaluation license is built into the Deployment Server. No license file is required. The evaluation license is set up during the Deployment Server installation.
- To obtain and use a 10-node, 30-day evaluation license:
  1. Access http://www.hp.com/servers/rdp/eval.
  2. Follow the online instructions. An evaluation license file will be e-mailed to you.

Purchased Licenses

To register your product and obtain your license file:

1. Locate the unique 20-character product registration number on the label **on the back** of the software-packaging box. The registration number is in the form:

   xxxxx-xxxxx-xxxxx-xxxxx

   IMPORTANT: Keep your product registration number for future reference.

2. Access http://www.hp.com/servers/rdp/register.
3. Follow the online instructions to complete the registration process. A license file will be e-mailed to you.

Additional purchased licenses can be transferred or combined with already registered licenses. Refer to the instructions at http://www.hp.com/servers/rdp/register.

Applying a License File

Applying Licenses During a First-Time Installation

To use the 10-node, seven-day evaluation license that is built into the Deployment Server, during the installation at the Altiris Deployment Server for Linux Configuration screen, press the **Enter** key when prompted to enter the License file path and name.

To use a purchased or evaluation license file, during the installation at the Altiris Deployment Server for Linux Configuration screen, enter the license file path and name in the **License file** field.

You can view the number of licensed nodes from the Web console using the **About** icon within the Web console toolbar.

Adding Licenses to an Existing Installation

If you have purchased additional licenses for an existing installation, to add the new license file to your Deployment Server:

1. Copy the license file into the /opt/altiris/deployment/adlserver directory.
2. Change directory to /opt/altiris/deployment/adlserver.
3. Use the Altiris license script to input the new file by the following command:

   ```
   ./license filename.lic --restart
   ```

   where `filename` is the name of the license file.

You can view the additional number of licensed nodes from the Web console using the **About** icon within the Web console toolbar.

Replacing Licenses in an Existing Installation

If you have previously purchased licenses, have returned or transferred the licenses, and have obtained a new license file that is to replace your existing license file:

1. At the Deployment Server, copy the license file into the /opt/altiris/deployment/adlserver directory.
2. Change directory to /opt/altiris/deployment/adlserver.
3. Use the Altiris license script to input the new file by the following command:

   ```
   ./license filename.lic --replace --restart
   ```

   where `filename` is the name of the license file.
4. When prompted, answer **`Y`** to replace all license Activation Keys.

You can view the number of licensed nodes from the Web console using the **About** icon within the Web console toolbar.

2

First-Time Installation

Overview

This chapter describes requirements and procedures for installing the Rapid Deployment Pack for the first time. The following installation infrastructures are discussed:

- A basic deployment infrastructure consisting of all components on a single server.
- A multi-server deployment infrastructure in which the DHCP server and the NFS server can be separate from the Deployment Server.

Deployment Infrastructure

Basic Deployment Infrastructure

In a basic deployment infrastructure, all Deployment Server components are installed on one server. The following graphic illustrates this setup.

The Rapid Deployment Pack installation provides means for installing the following components on the Deployment Server:

- Alitiris Deployment Server for Linux
  - — Deployment Server for Linux
  - — DHCP Server (ISC)
  - — Deployment Server Database (PostgresSQL)
  - — Deployment Server for Linux Web Console
  - — Deployment Server Client Access Point
  - — Altiris PXE Server
- ProLiant Integration Module for Linux Deployment Server
- ProLiant Integration Module for NFS

Multi-Server Deployment Infrastructure

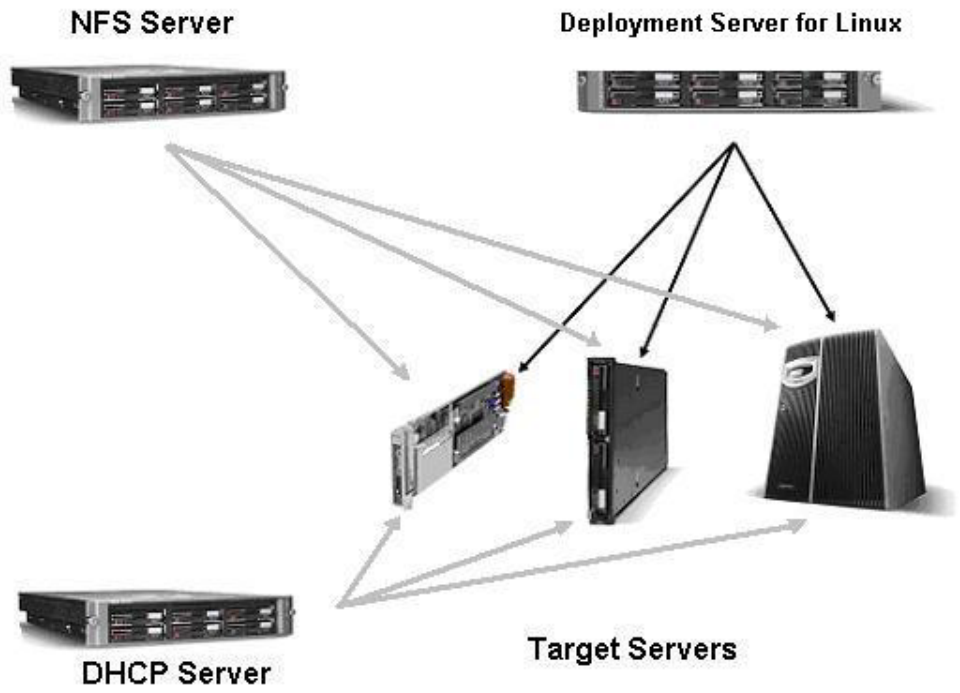
In a multi-server deployment infrastructure, the DHCP server or the NFS server can be separate from the Deployment Server. The following graphic depicts the multi-server deployment infrastructure.

The Rapid Deployment Pack installation provides means for installing the following components on the Deployment Server:

- Altiris Deployment Server for Linux
  - — Deployment Server for Linux
  - — Deployment Server Database (PostgresSQL)
  - — Deployment Server for Linux Web Console
  - — Deployment Server Client Access Point
  - — Altiris PXE Server
- ProLiant Integration Module for Linux Deployment Server

The Rapid Deployment Pack installation provides means for installing the following components on the NFS Server:

- ProLiant Integration Module for NFS



Installation Requirements

This section describes the requirements to successfully install each component of the Rapid Deployment Pack.

Network Infrastructure Requirements

The Rapid Deployment Pack is designed to perform optimally with DHCP and PXE in the network environment. DHCP and PXE are not required to use the Rapid Deployment Pack; however, if PXE is used to perform remote deployment of servers, DHCP must be installed and accessible on the network. Other alternatives, such as boot diskettes, are available. Two DHCP server setup options available with Rapid Deployment Pack include either DHCP running on the Deployment Server or running DHCP on a separate server in the network.

If you choose to install DHCP on the Deployment server, you must use the DHCP server included with the Rapid Deployment Pack. DHCP is provided as part of the Rapid Deployment Pack installation.

If you have an existing DHCP server that supports PXE, no additional installation steps are needed for PXE to function. Do not use the Rapid Deployment Pack installation to install DHCP on the separate server.

System Requirements

The following system requirements for the deployment server, NFS server, and target servers must be met before installing the Rapid Deployment Pack. A separate NFS server is not required but is supported.

Linux Deployment Server

The deployment server hardware and network configuration must be:

- An Intel® Pentium® III or higher processor
- At least 256 MB RAM
- A CD-ROM drive
- A network connection, configured with a static IP address and hostname
- Set with the current date and time for the Deployment Server using ROM-Based Setup Utility (RBSU).

The deployment server software and configuration must be:

- Red Hat Enterprise Linux AS 2.1 Update 2, Red Hat Enterprise Linux ES 2.1 Update 2, or UnitedLinux 1.0 installed

NOTE: UnitedLinux 1.0 refers to Conectiva Enterprise Linux, SCO Linux Server 4.0, SuSE Linux Enterprise Server 8, and TurboLinux Enterprise Server 8 powered by UnitedLinux 1.0.

- ProLiant Support Pack for Linux to provide the latest supported network drivers for the deployment server
- A minimum of 4 GB of available disk space on /opt, plus additional space to store any captured disk images or application installation files

NOTE: The default Red Hat Enterprise Linux 2.1 install places /opt in /, which is only 384 MB.

- The SAMBA SMB server package with minimum version 2.2.1 must be installed before running the Rapid Deployment Pack installation. An adequate version of SAMBA is included with the Red Hat Enterprise Linux 2.1 and UnitedLinux 1.0 distributions.
- PostgresSQL client package will be installed during the Rapid Deployment Pack installation; however, if it is installed before Rapid Deployment Pack installation, version 7.2.2 or later is required. Red Hat Enteprise Linux 2.1 distribution contains postgresSQL with an earlier version than 7.2.2.
- To access the Web console, the minimum browser versions required for Linux are Mozilla 1.0.1 and Netscape 6.1. (A client running Windows will be able to access the Web console using either Netscape 6.1 or Internet Explorer 5.5 or later.)
- (Optional) The X Window System package (xpdf) for viewing .pdfs to view the Rapid Deployment Pack—Linux Edition documents on the source CD or on the Deployment Server under the ./docs directory after the Deployment Server installation is complete.
- If a firewall is installed on the server, the configuration must allow communication through the ports listed in Table 2-1:

Table 2-1: Open Ports for Deployment Server Firewall Configuration

Port	Function
TCP/402	Listens for client connections
UDP/402	Listens for server discovery packets
TCP/405	Listens for file transfer requests
TCP/5432	`postgres` server listens on this port
UDP/67	PXEServer when use DHCP option is set to true
UDP/4011	PXEServer
UDP/1759	PXEmtftp when Multicasting is enabled
UDP/69	tftp
TCP/1010	PXECfgServer
TCP/8080	Used by Tomcat

For the Rapid Deployment Pack installation, HP recommends having:

- A license file (for information on licensing, refer to Chapter 1 in this guide) for purchased licenses or 30-day evaluation licenses
- Red Hat Enterprise Linux distribution CD #1 available (required for populating boot files if Red Hat Enterprise Linux AS 2.1 or Red Hat Enterprise Linux ES 2.1 jobs are selected)

For additional information about requirements for the deployment server, refer to the *Altiris Deployment Server 5.6 for Linux Product Guide,* which can be found at http://www.hp.com/servers/rdp.

Linux NFS Server

The Deployment Server can also be used as the NFS server, or a separate NFS server can be configured. The NFS server hardware and network configuration must consist of:

- A CD-ROM drive
- A network connection, configured with a static IP address, with DNS available on the network if a hostname will be used in the provided jobs

The NFS server software and configuration must consist of:

- If separate from the Deployment Server, Red Hat Linux 7.2, Red Hat Linux 7.3, Red Hat Linux 8.0 Professional, Red Hat Enterprise Linux AS 2.1 Update 2 or earlier, Red Hat Enterprise Linux ES 2.1 Update 2, or UnitedLinux 1.0
- ProLiant Support Pack for Linux to provide the latest supported network drivers for the NFS server
- At least 1.9 GB of available disk space on the /usr directory for each distribution that is installed from the Linux NFS server
- NFS software installed and configured (If a firewall is installed on the server, the configuration must allow incoming NFS connections, for example, UDP port 2049 for a typical NFS port.)

For the Rapid Deployment Pack installation, HP recommends having Red Hat Linux or UnitedLinux Distribution CDs available.

Target Servers

The Rapid Deployment Pack supports ProLiant BL servers and select ProLiant ML/DL servers. For details on target server requirements, refer to the *HP ProLiant Essentials Rapid Deployment Pack—Linux Edition Support Matrix* for your version of Rapid Deployment Pack.

Basic Installation

This section provides directions for installing the Rapid Deployment Pack on your server. This basic installation includes the Altiris Deployment Server for Linux, ProLiant Integration Module for Linux Deployment Server, and ProLiant Integration Module for NFS installed on the same server. The Altiris Deployment Server for Linux includes installation for DHCP, PXE, database, Web console, and client access point components.

To install software from the Rapid Deployment Pack—Linux Edition CD on the deployment server:

1. Insert the Rapid Deployment Pack—Linux Edition CD into the intended deployment server.
2. Log in as `root` at the intended deployment server.
3. Mount the CD:

   `mount /mnt/cdrom` (Red Hat)

   or

   `mount /media/cdrom` (UnitedLinux)

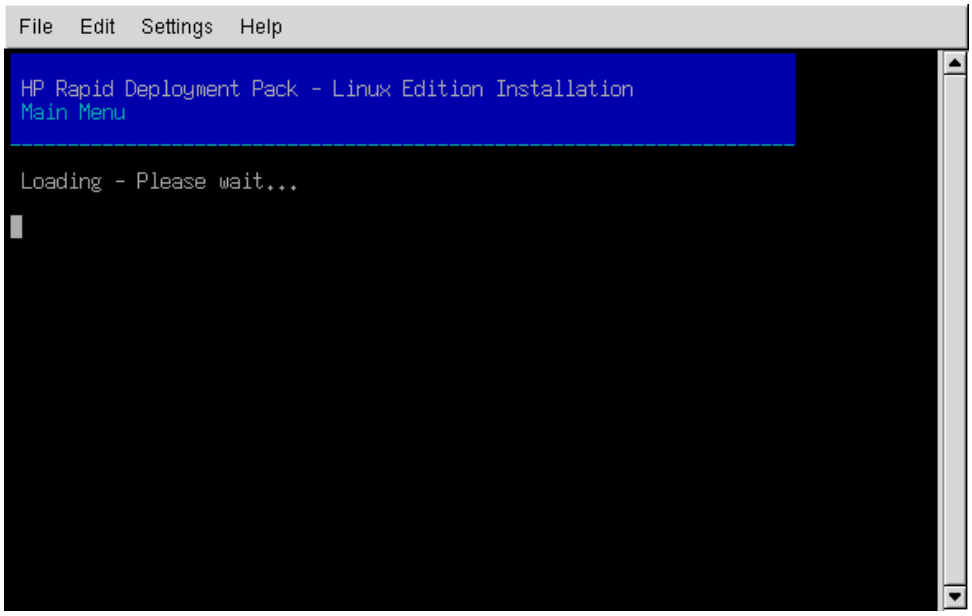
4. Run the setup script:

   `/mnt/cdrom/setup.sh` (Red Hat)

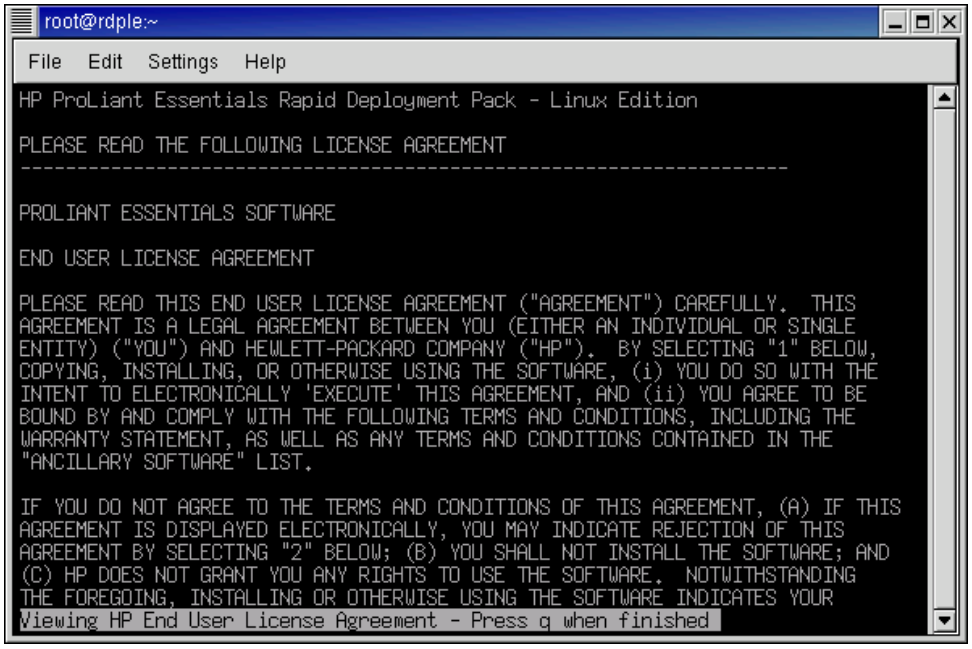
   or

   `/media/cdrom/setup.sh` (UnitedLinux)

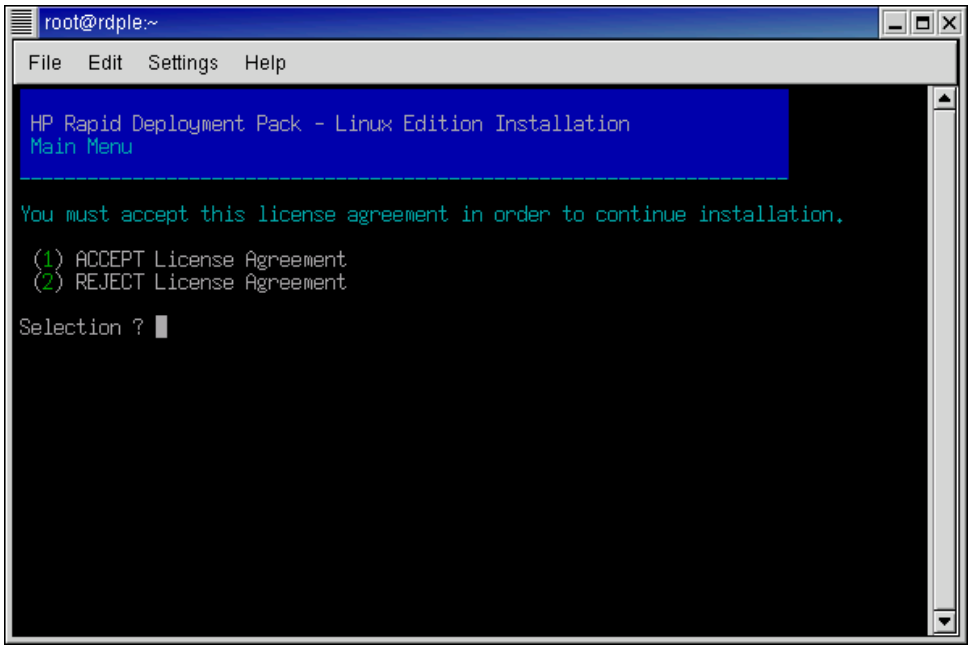
NOTE: Do not change directory to the CD-ROM directory to run the setup script.



5. Read the license agreement displayed. When finished reading the agreement, enter **q.**

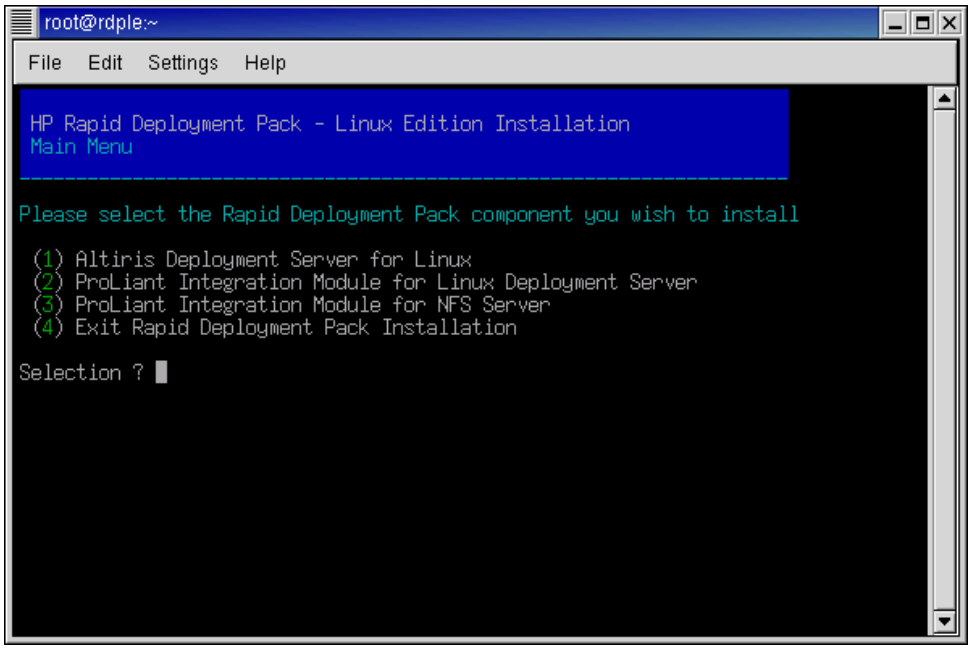


6. If you agree to the terms of the license agreement, enter **1** to **ACCEPT License Agreement** and press the **Enter** key.

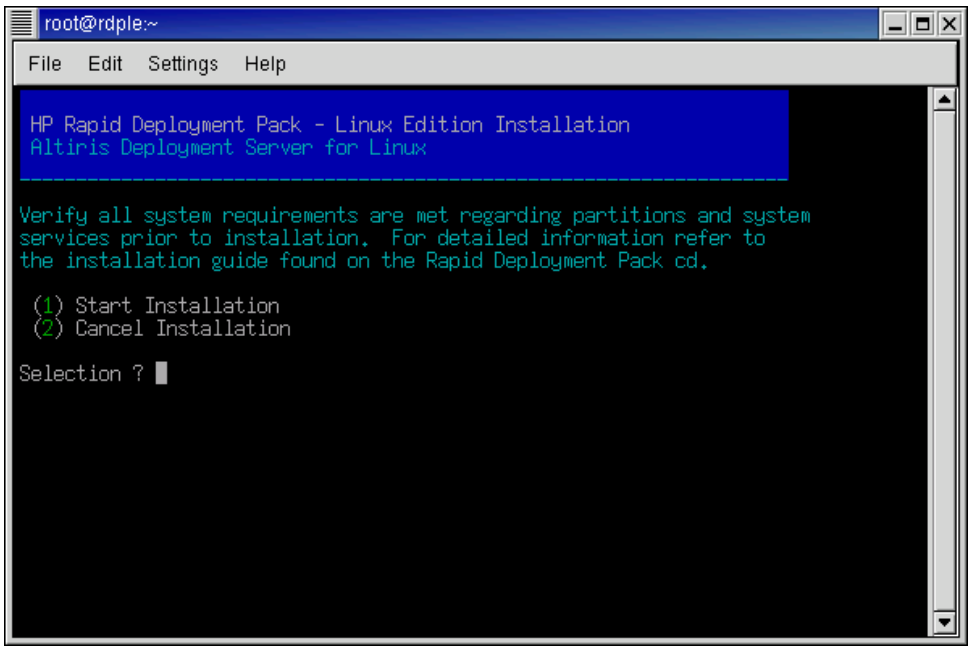


Altiris Deployment Server for Linux

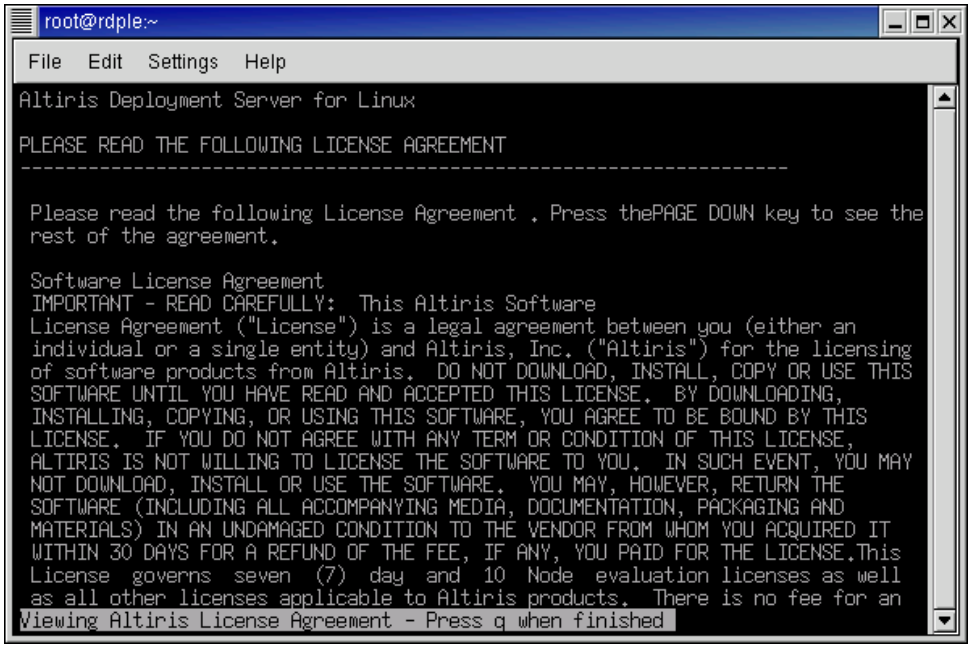
1. Enter **1** to choose **Altiris Deployment Server for Linux** from the main menu, and press the **Enter** key to begin the installation process.



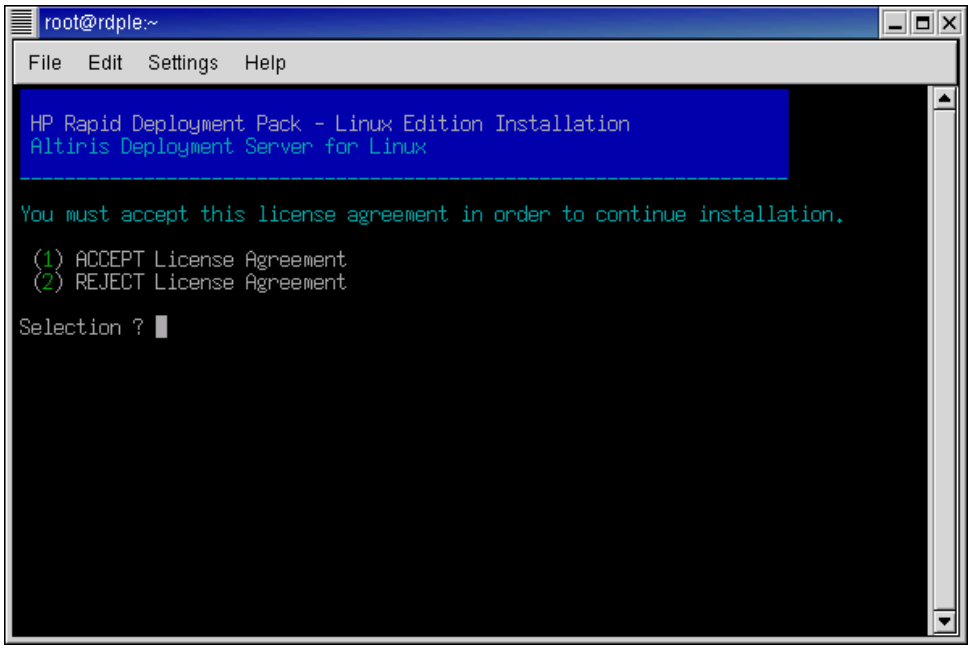
2. Enter **1** to choose **Start Installation,** and press the **Enter** key. This process will extract the files and install the Altiris Deployment Server for Linux components after the license agreement is accepted.



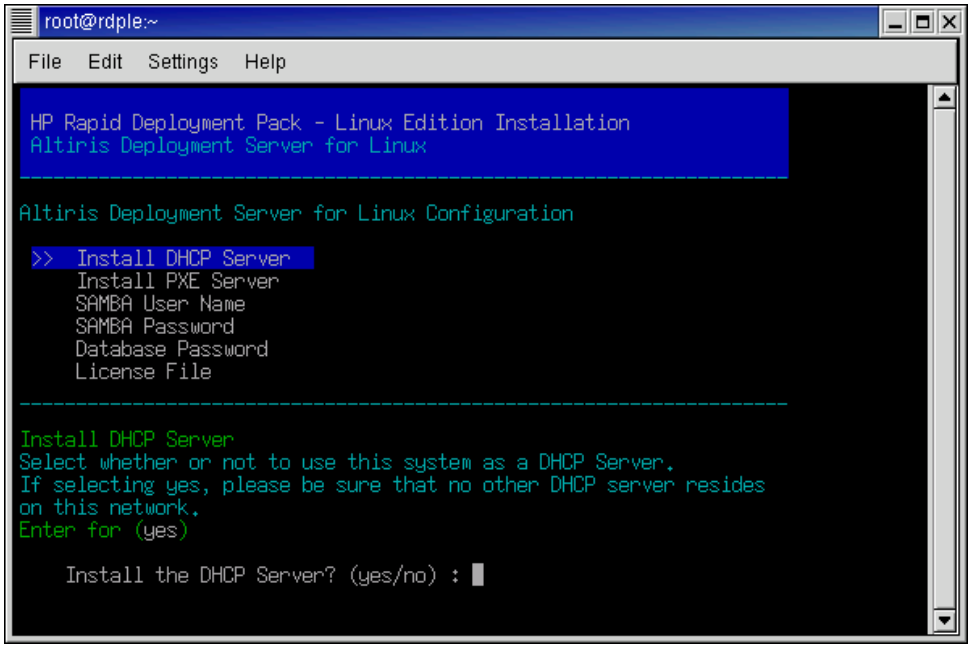
3. Read the license agreement displayed. When finished reading the agreement, enter **q.**



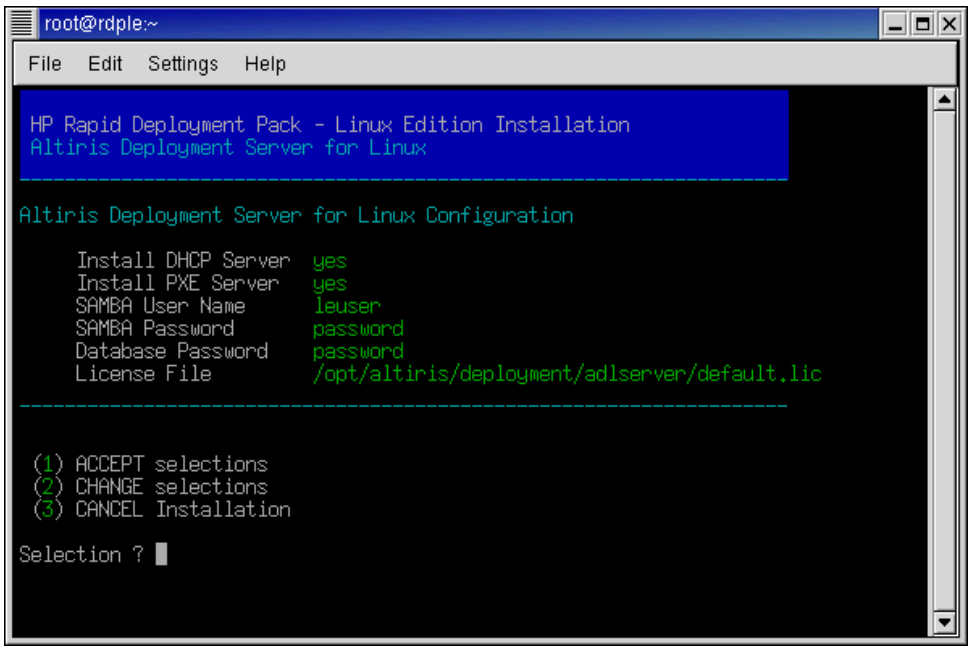
4. If you agree to the terms of the license agreement, enter **1** to **ACCEPT License Agreement** and press the **Enter** key.



5. At the Altiris Deployment Server for Linux Configuration screen, you are asked several questions regarding the DHCP and PXE servers, SAMBA user name and password, Database Password, and License file information. Press the **Enter** key to accept the **yes** default to **Install DHCP Server.**

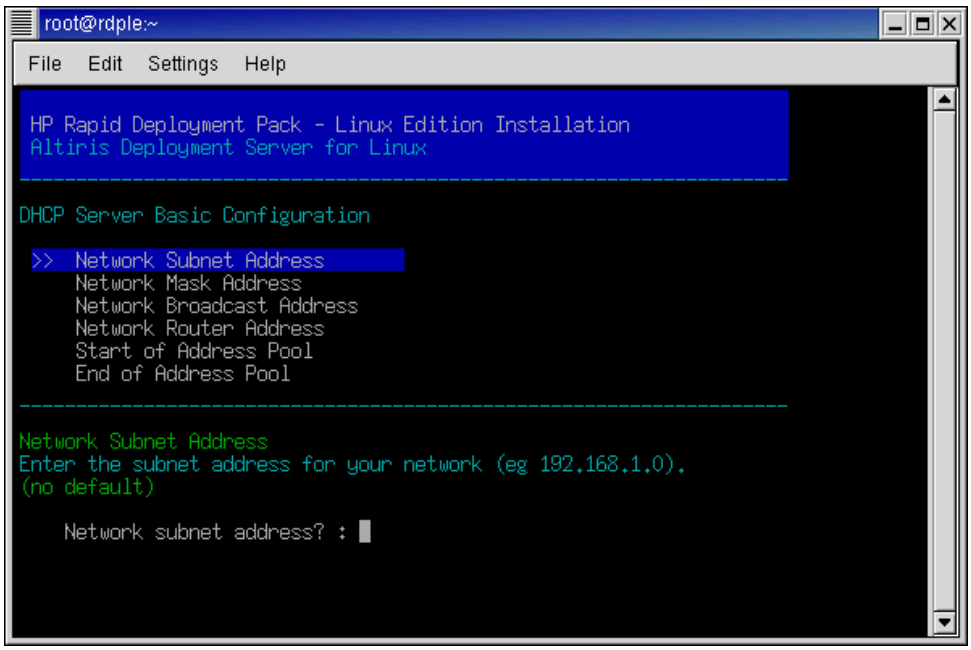


6. Press the **Enter** key to accept the **yes** default to **Install PXE Server.**
7. Enter a **SAMBA User Name** and press the **Enter** key, or press the **Enter** key to use the default name.
8. Enter a **SAMBA Password** and press the **Enter** key.
9. Enter a **Database Password** and press the **Enter** key.
10. For the **License File,** either press the **Enter** key to select a free seven-day evaluation license or enter the path and filename of the Altiris license file and press the **Enter** key. For more information on licensing, refer to Chapter 1.
11. Enter **1** to **ACCEPT selections** and press the **Enter** key.



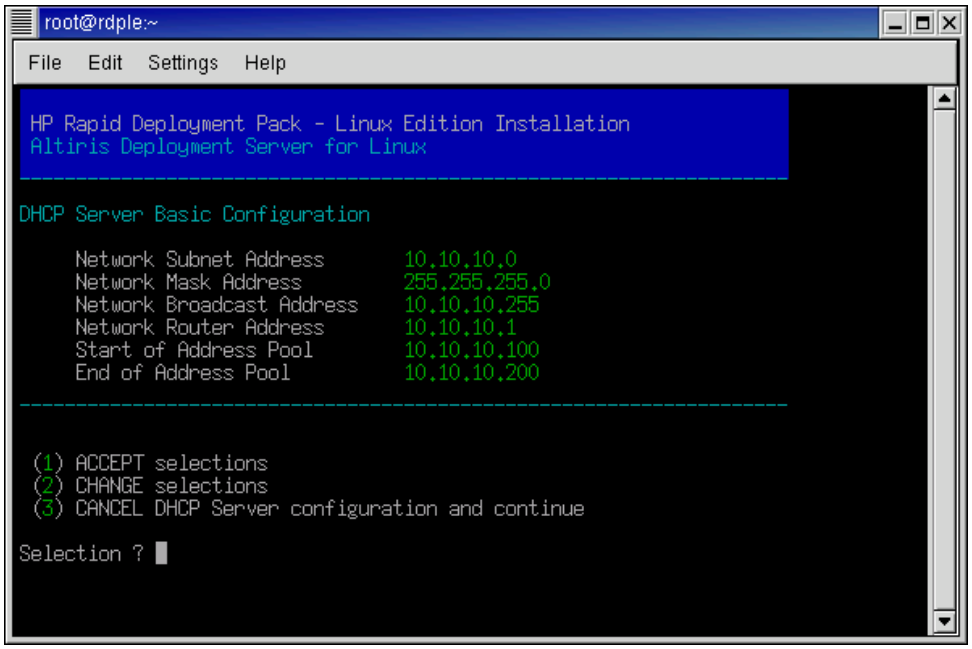
NOTE: The passwords used here are for illustrative purposes only. You will need to modify these passwords to reflect your particular environment.

12. After the Altiris Deployment Server for Linux installation, the **DHCP Server Basic Configuration** screen appears. Enter a **Network Subnet Address** and press the **Enter** key.



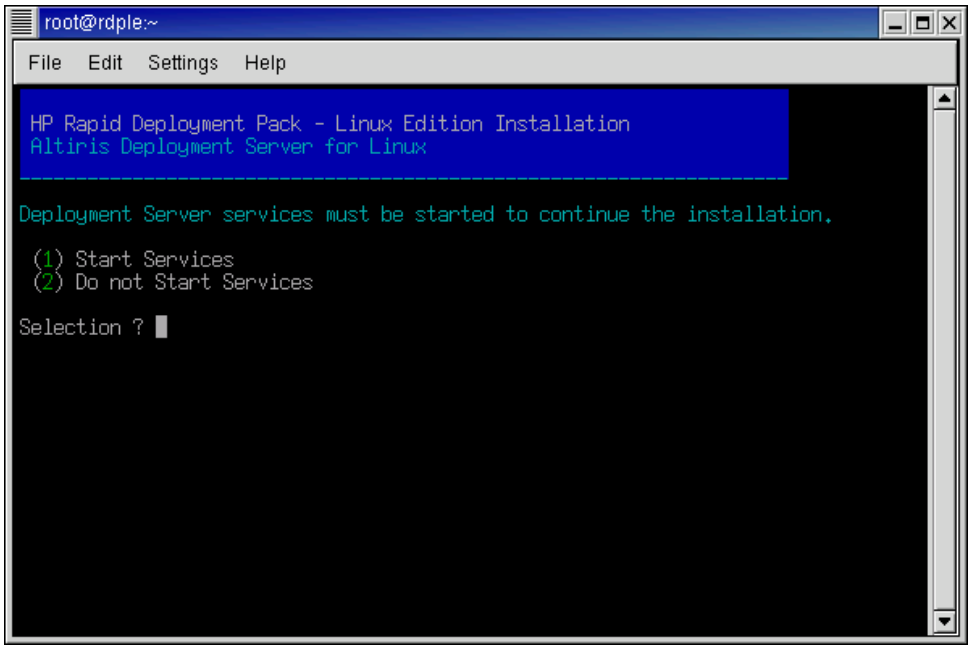
13. Enter the **Network Mask Address** and press the **Enter** key.
14. Enter the **Network Broadcast Address** and press the **Enter** key.
15. Enter the **Network Router Address** and press the **Enter** key. An IP address for a valid server must be entered.
16. Enter the **Start of Address Pool** IP address and press the **Enter** key.
17. Enter the **End of Address Pool** IP address and press the **Enter** key.

18. Enter **1** to **ACCEPT selections** and press the **Enter** key.

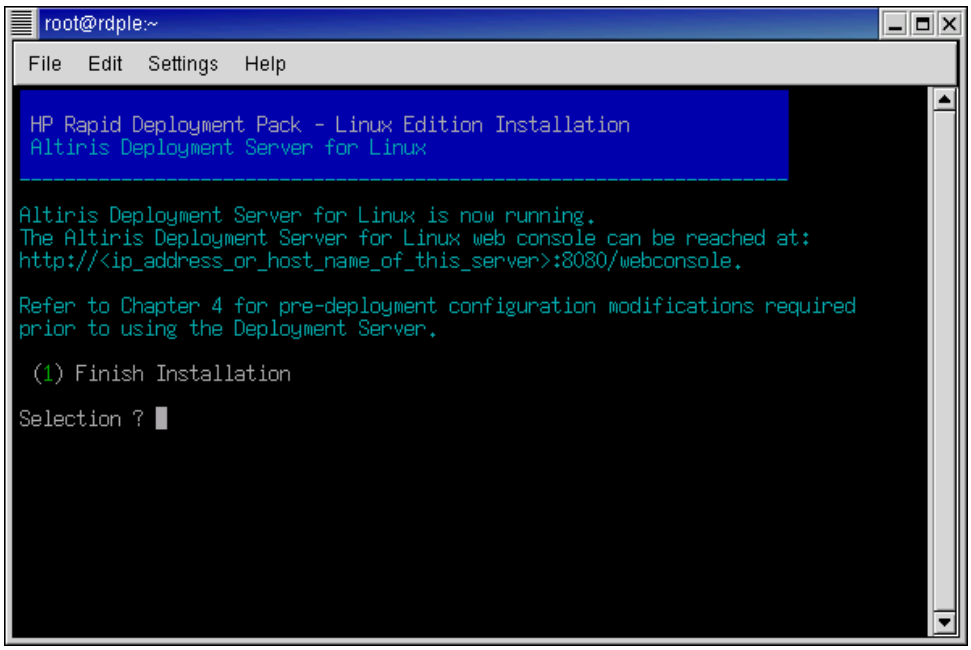


NOTE: The addresses used here are for illustrative purposes only. You must modify these addresses to reflect your particular environment.

19. After the DHCP settings have been applied and verified, enter **1** to choose **Start Services** and press the **Enter** key.

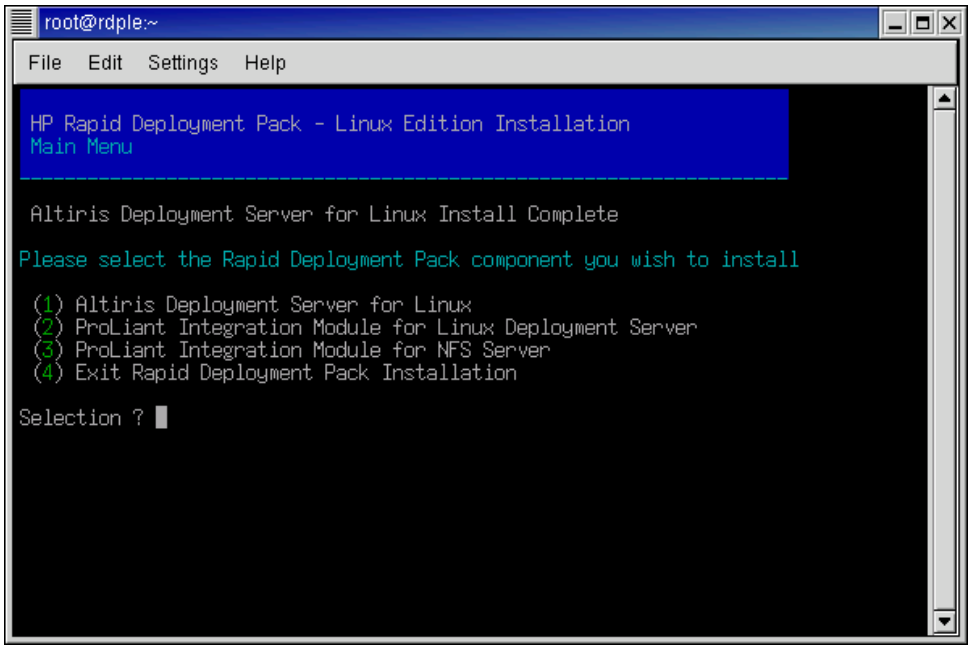


20. The following screen confirms that the services have started and provides information for accessing the Web console. Enter **1** to choose **Finish Installation** and press the **Enter** key.

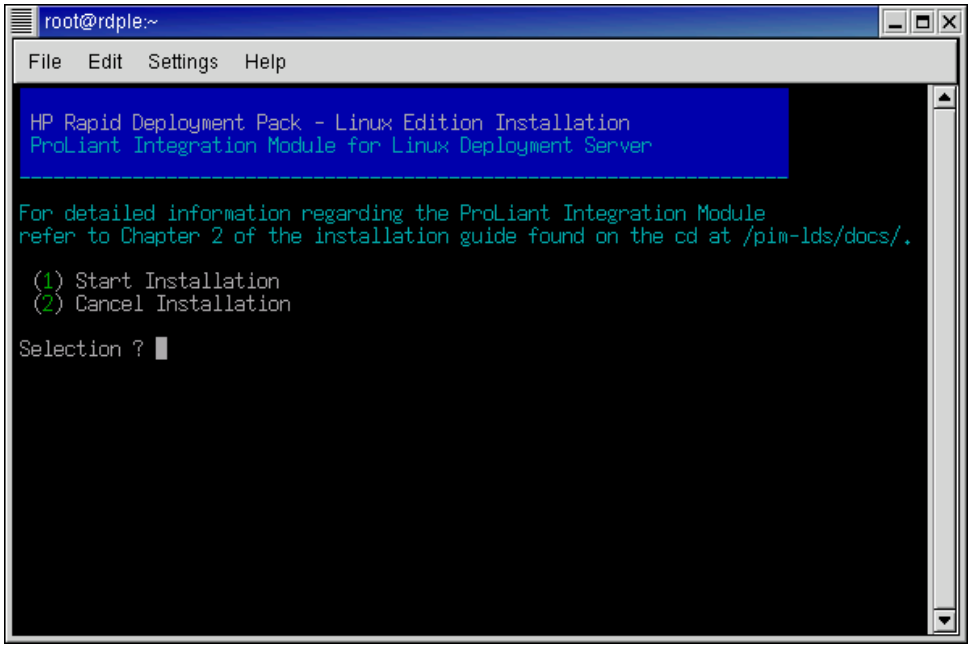


ProLiant Integration Module for Linux Deployment Server

1. The Rapid Deployment Pack main menu appears. Enter **2** to choose **ProLiant Integration Module for Linux Deployment Server** and press the **Enter** key.



2. Enter **1** to choose **Start Installation** and press the **Enter** key.

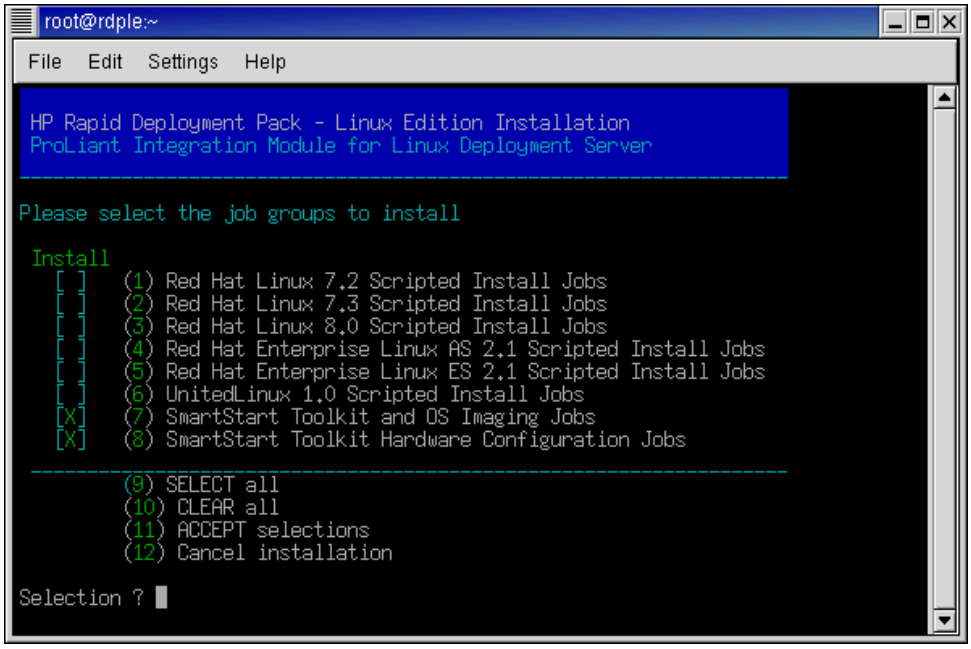


3. After the ProLiant Integration Module for Linux Deployment Server files are copied, a list of available deployment jobs displays.

   For each set of jobs you want installed, enter the selection number for the jobs and press the **Enter** key. To select all jobs, enter the selection number for **SELECT all** and press the **Enter** key.

   The provided deployment jobs consist of:

   - **Red Hat and UnitedLinux Scripted Install Jobs** enable a scripted hardware configuration and operating system installation of Red Hat Linux or UnitedLinux to be performed on a ProLiant server.
   - **Smart Start Toolkit and OS Imaging Jobs** enable capture of a server hardware configuration and an image of a server hard drive, including the operating system and software applications, and deploys this hardware configuration and image to unconfigured ProLiant servers.
   - **SmartStart Toolkit Hardware Configuration Jobs** enable capture of an existing server's hardware configuration and deploys that configuration to other servers.

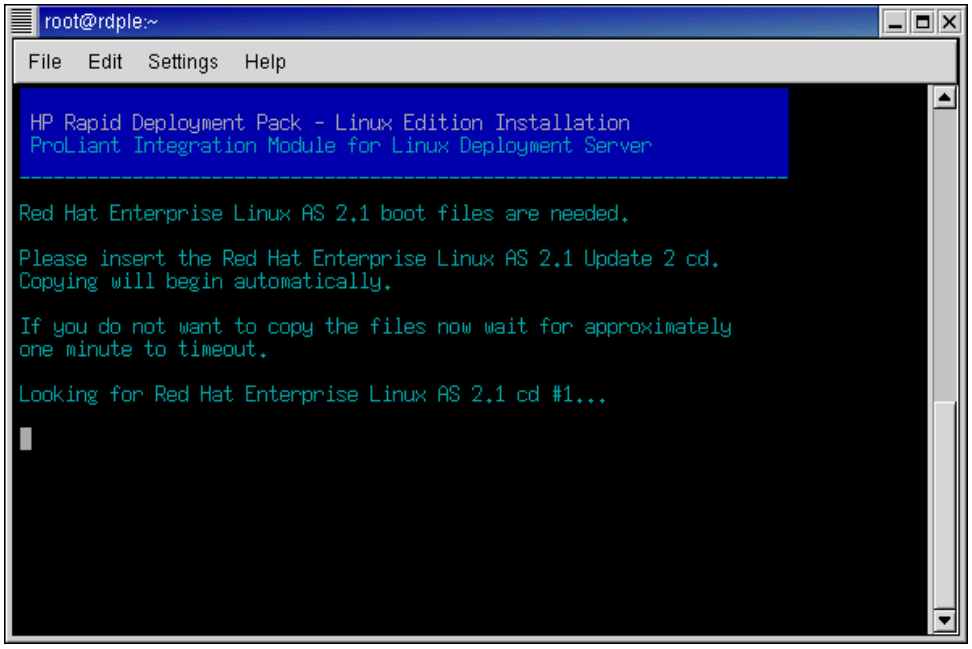


4. When finished making your job selections, enter the selection number for **ACCEPT selections** and press the **Enter** key. This process will start the import of the jobs selected, which might take several minutes depending on number of jobs chosen.

5. If you select Red Hat Enterprise Linux AS 2.1, you are prompted to copy the Red Hat Enterprise Linux boot files required for scripted install jobs to the Deployment Server directory. Insert your Red Hat Enterprise Linux AS 2.1 Update 2 CD #1 when prompted. If the installation times out after one minute of looking for the CD, you will be prompted to either retry or to skip this step.

IMPORTANT: If you skip the Red Hat Enterprise Linux boot files copying steps at this time by choosing to **Skip this step** after the time-out**,** you can manually install these files at a later time. For instructions, refer to Appendix A in this guide.

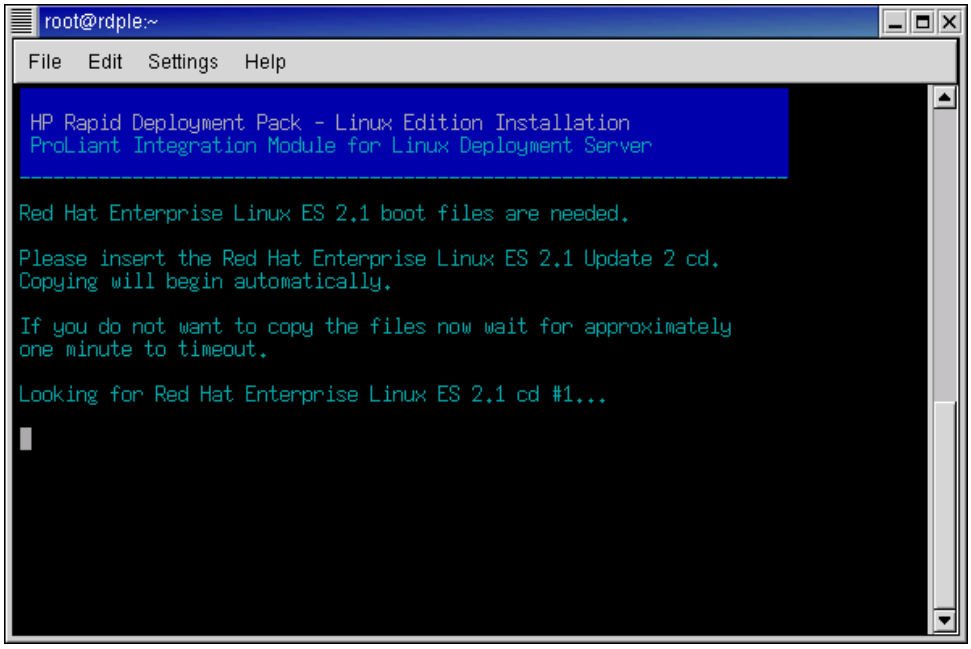
NOTE: You are prompted for the Red Hat Enterprise Linux 2.1 CD #1 to copy the Linux boot files to the Deployment Server. The Red Hat Enterprise Linux distributions CDs are installed on the NFS server. Use the same CD distribution during the installations of the Deployment Server and NFS server.



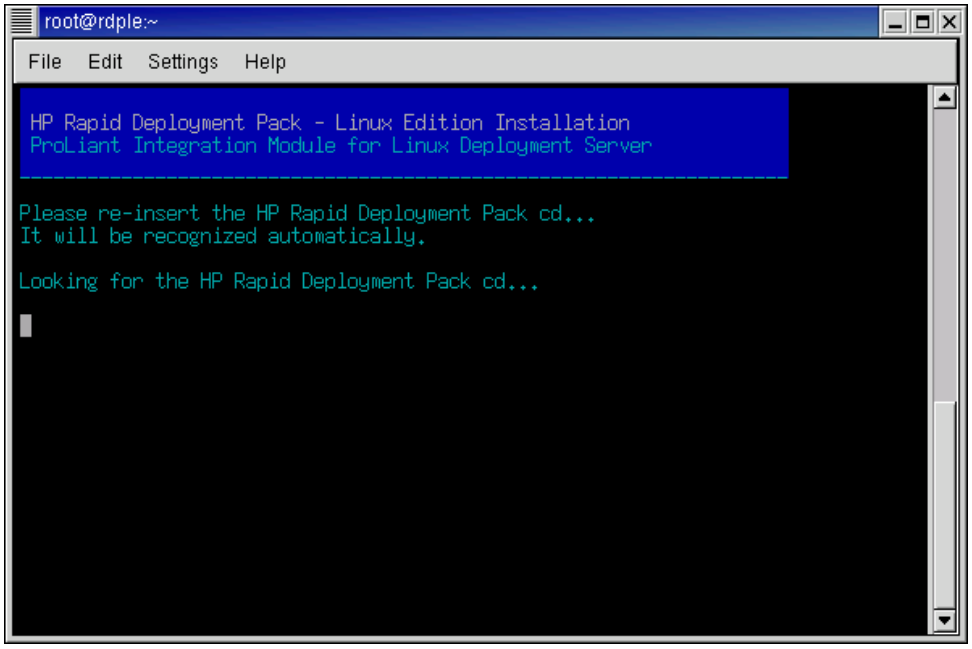
6. If you select Red Hat Enterprise Linux ES 2.1, you are prompted to copy the Red Hat Enterprise Linux boot files required for scripted install jobs to the Deployment Server directory. Insert your Red Hat Enterprise Linux ES 2.1 Update 2 CD #1 when prompted. If the installation times out after one minute of looking for the CD, you will be prompted to either retry or to skip this step.

IMPORTANT: If you skip the Red Hat Enterprise Linux boot files copying steps at this time by choosing to **Skip this step** after the time-out**,** you can manually install these files at a later time. For instructions, refer to Appendix A in this guide.

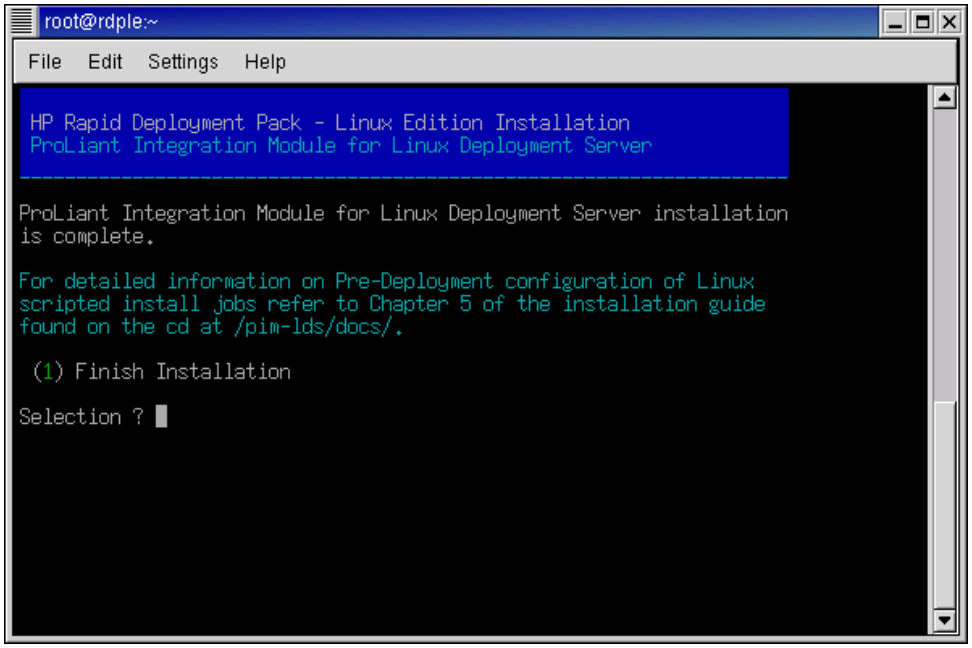
NOTE: You are prompted for the Red Hat Enterprise Linux 2.1 CD #1 to copy the Linux boot files to the Deployment Server. The Red Hat Enterprise Linux distributions CDs are installed on the NFS server. Use the same CD distribution during the installations of the Deployment Server and NFS server.



7. When prompted, place the Rapid Deployment Pack—Linux Edition CD in the CD-ROM drive.

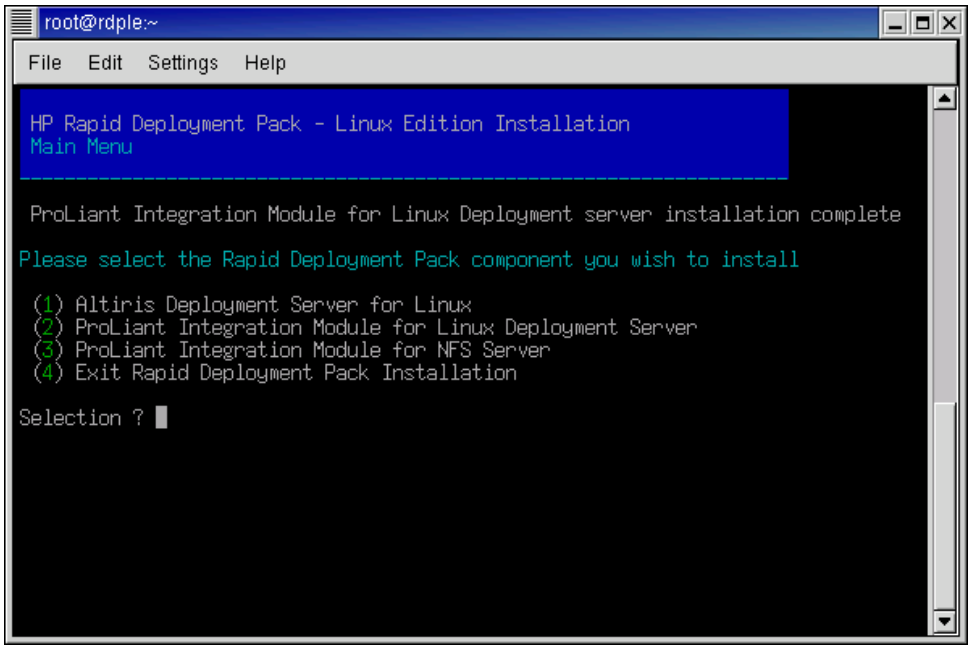


8. The following screen confirms the ProLiant Integration Module for Linux Deployment Server installation is complete. Enter **1** to choose **Finish Installation** and press the **Enter** key.

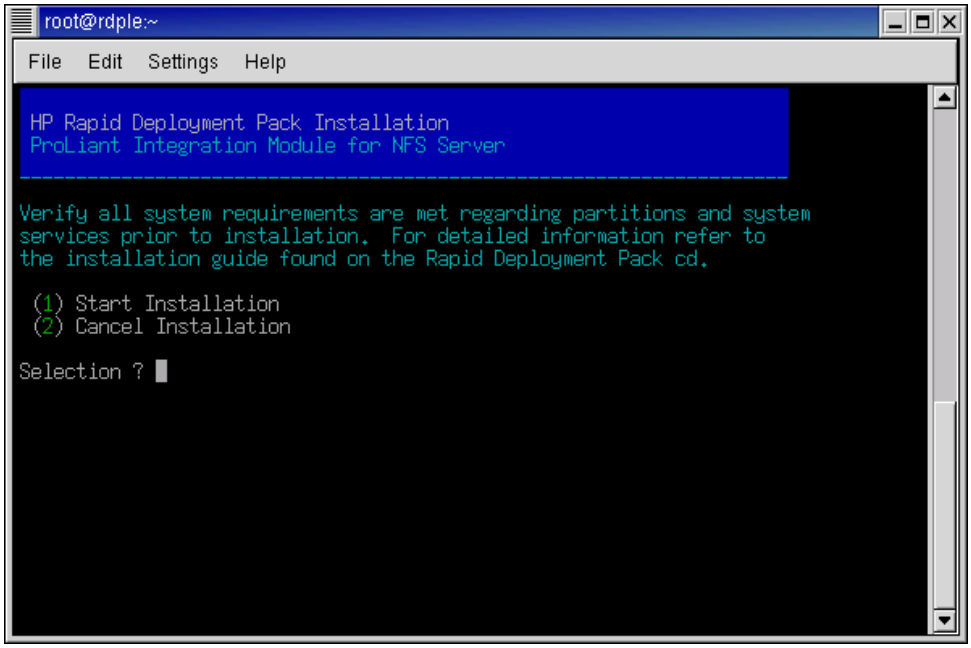


ProLiant Integration Module for NFS Server

1. The Rapid Deployment Pack main menu appears. Enter **3** to choose **ProLiant Integration Module for NFS Server** and press the **Enter** key.

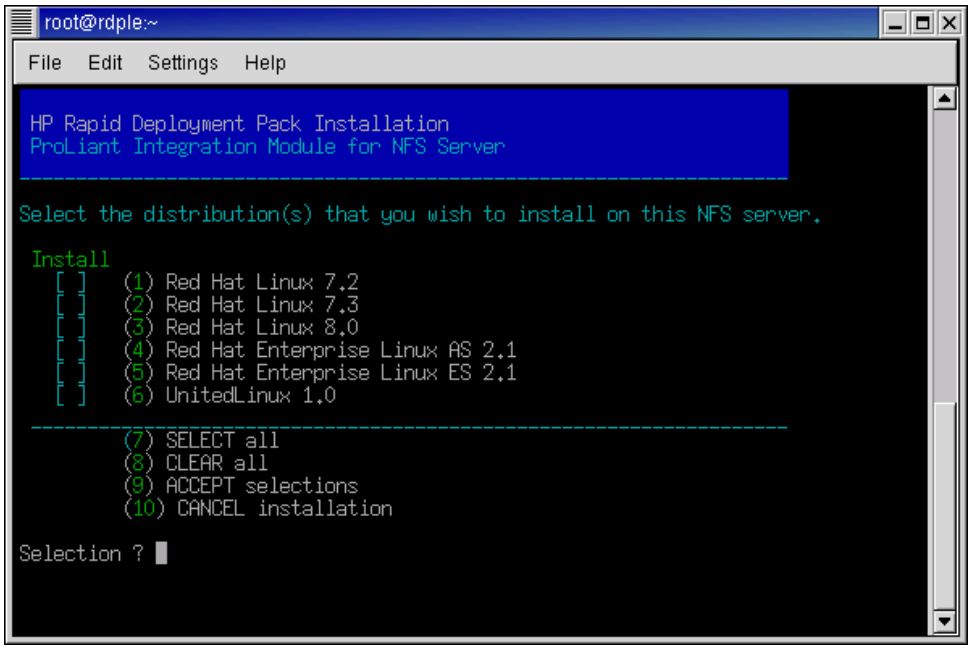


2. Enter **1** to choose **Start Installation** and press the **Enter** key.



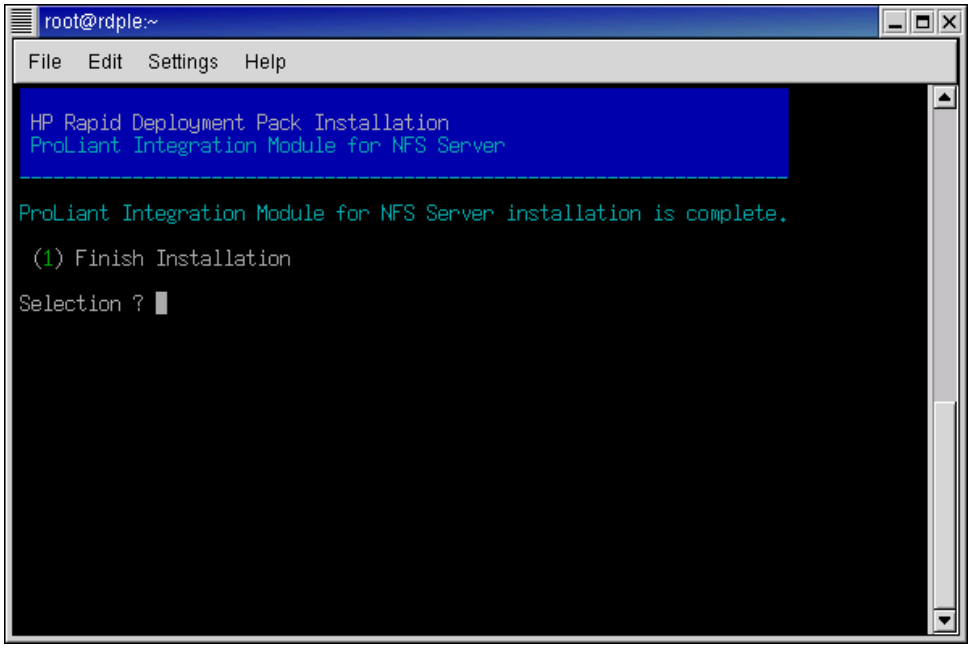
3. A list of the supported Linux distributions that can be deployed with Rapid Deployment Pack is displayed. Selecting a Linux Distribution will copy the ProLiant Support Pack files for that distribution and begin the Linux distribution CD query process to copy the Linux files onto the NFS server.

   For each distribution you want installed, enter the selection number for the specific distribution and press the **Enter** key. To select all distributions, enter the selection number for **SELECT all** and press the **Enter** key.



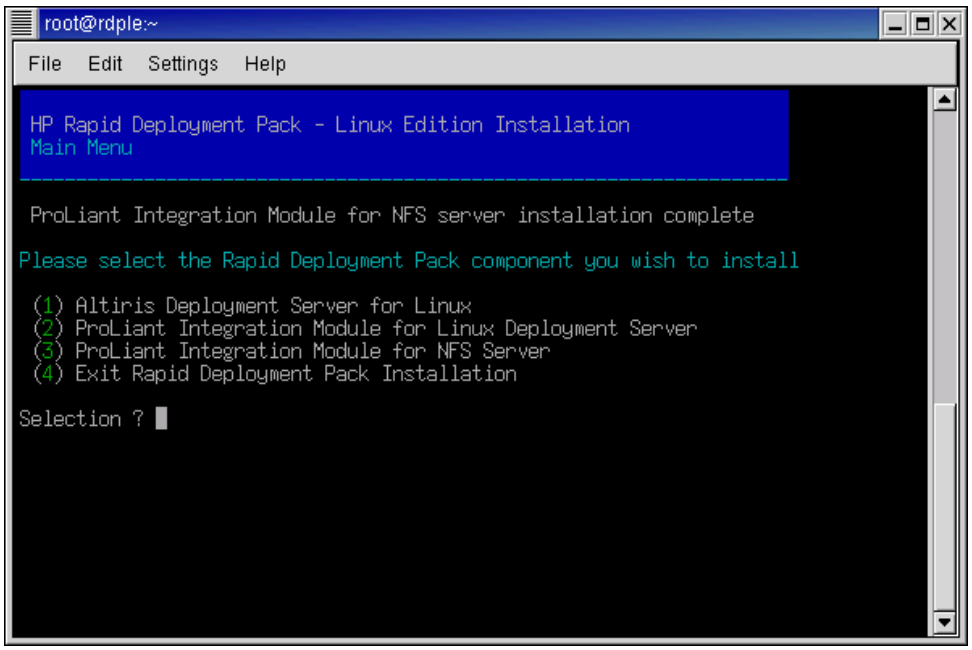
4. When you have finished making your Linux distribution selections, enter the selection number for **ACCEPT selections** and press the **Enter** key. This process will start the file copy and CD query process.
5. Once the ProLiant Support Pack files and distributions files are copied, you will be prompted for the Rapid Deployment Pack—Linux Edition CD. When prompted, place the CD in the CD-ROM drive.

6. The following screen confirms the ProLiant Integration Module for NFS Server installation is complete. Enter **1** to choose **Finish Installation** and press the **Enter** key.



Installation Complete

The Rapid Deployment Pack main menu appears. Enter **4** to choose **Exit Rapid Deployment Pack Installation** and press the **Enter** key.



The Deployment Server installation is complete. However, before attempting to use the Deployment Server and perform Linux distribution scripted installs complete the procedures in Chapters 4 and 5.

Multi-Server Installation

In performing a multi-server deployment infrastructure installation, both the DHCP Service and NFS Service can reside on servers other than the deployment server. The version of DHCP used must support the client classing and conditional behaviors required for PXE.

To use DHCP on a separate server:

- During the Altiris Deployment Server for Linux installation, enter **no** and press the **Enter** key when prompted for **Install the DHCP Server.**

To use a separate NFS server:

- During the Deployment Server installation, do not continue with the ProLiant Integration Module for NFS installation step.
- On a separate NFS server that meets the prerequisites, mount the Rapid Deployment Pack CD-ROM and run the Deployment Server setup script, setup.sh. Follow the steps in the "ProLiant Integration Module for NFS Server" section of this chapter, entering **3** to choose **ProLiant Integration Module for NFS Server** from the main menu to begin the ProLiant Integration Module for NFS Server installation.

3

Upgrading

Overview

This section will provide information for upgrading any or all of the Rapid Deployment Pack components to a newer version as new versions become available.

4

Pre-Deployment Configuration for the Deployment Server

Overview

This chapter describes required and optional Deployment Server configuration modifications that must be performed before using the Deployment Server.

The following topics are discussed in this chapter:

- Configuring the access settings for Deployment Server for Linux Web console
- Synchronizing the Web console Display Name with the Linux Name
- Modifying the Primary Lookup Key
- Configuring ProLiant BL server enclosures
- Creating physical boot diskettes for server deployment

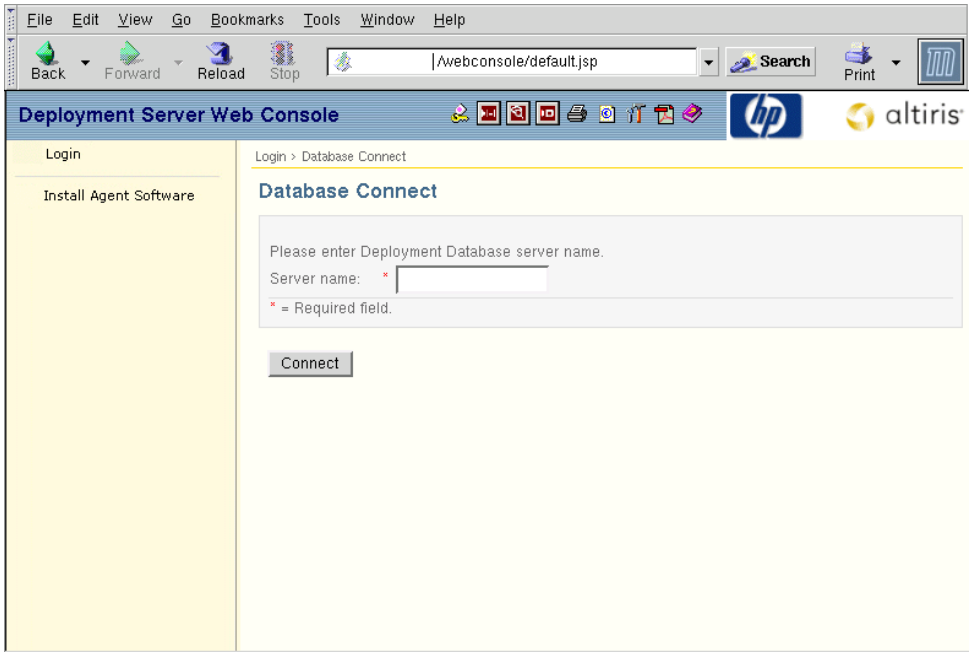
Configuring the Access Settings for the Deployment Server for Linux Web Console

1. Access the Web console through a Web browser at http://hostname:8080/webconsole

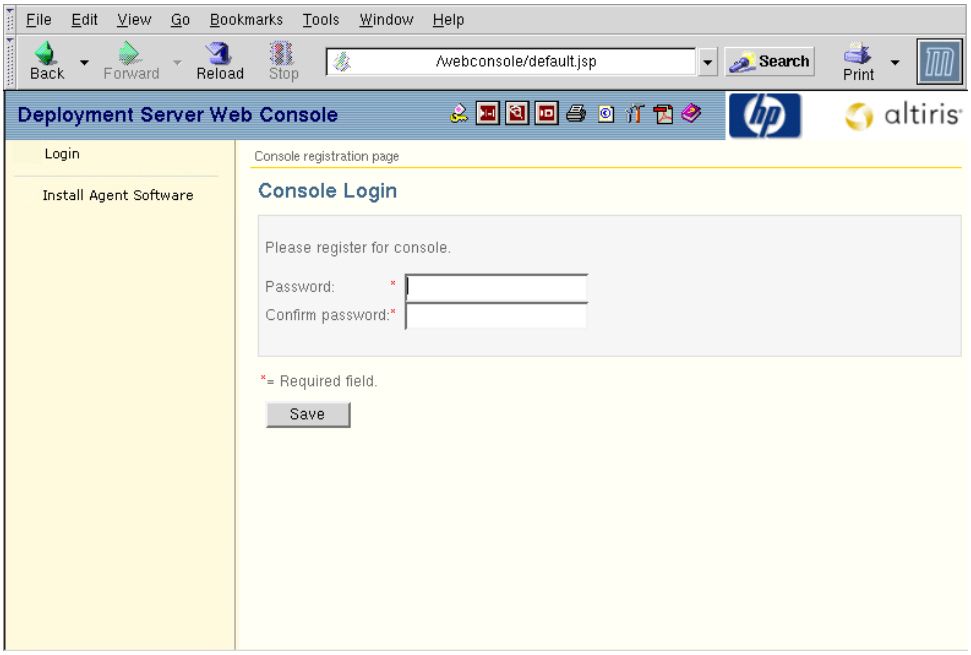
   where hostname is the host name of the Deployment Server or the static IP address of the Deployment Server in the form of xxx.xxx.xxx.xxx. For example: http://192.168.1.1:8080/webconsole.

   NOTE: Initial access to each page will be sluggish because the Java Server Pages must be compiled. Subsequent page access will occur more quickly.

2. At the Database Connect window, enter the Deployment Server hostname or IP address. Click **Connect.**



3. At the Console Login window, enter a password and click **Save.** This password is used to gain access to the Web console and should be retained for future use.

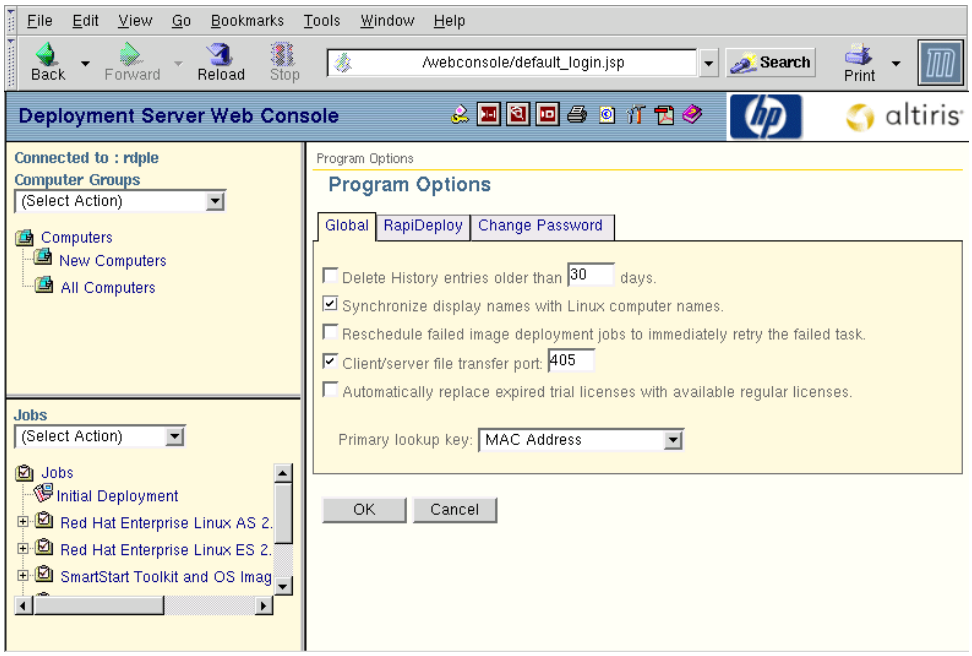


Synchronizing the Web Console Display Name with the Linux Name

The Deployment Server has the capability to use a Web console display name that is different from the actual server hostname. However, you can select to have the Web console always reflect the same name as the server hostname.

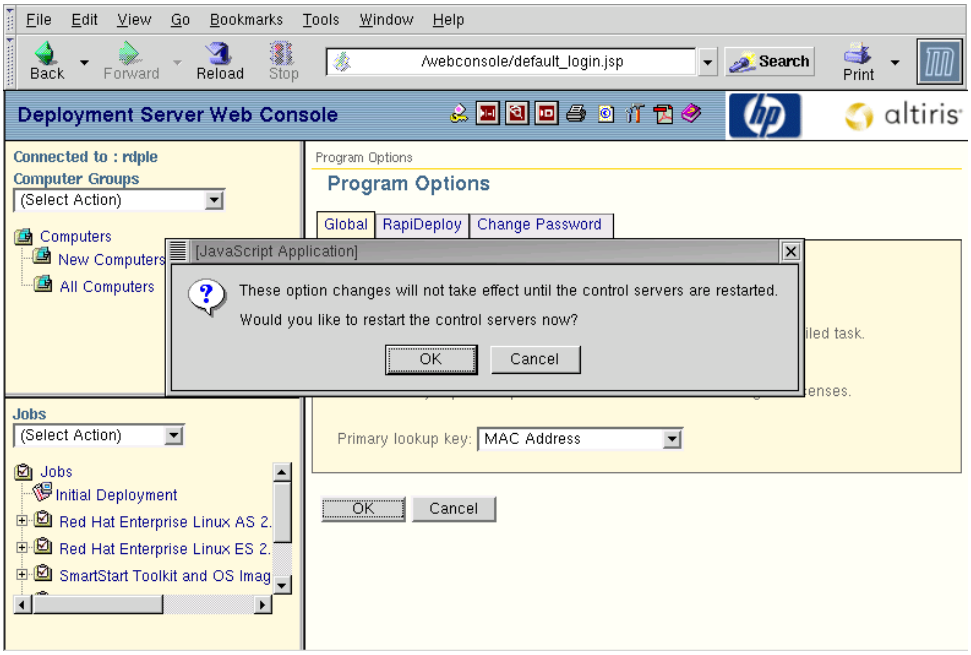
To synchronize the Web console and server hostname:

1. At the Web console toolbar, click the **Program Options** icon. The **Program Options** information displays in the Details pane.
2. Select the **Global** tab.
3. Select **Synchronize display names with Linux computer names.**



4. Click **OK.**

5. Click **OK** when prompted to restart the control servers.



Modifying the Primary Lookup Key

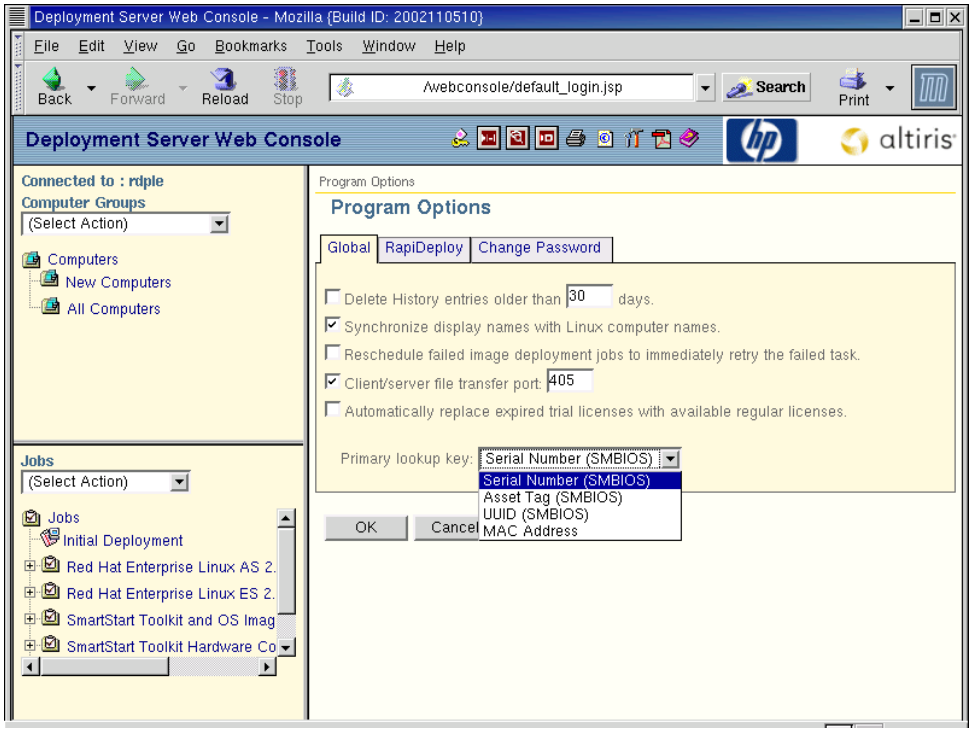
The Deployment Server uses the primary lookup key to determine if a server is already in the database.

HP recommends setting the primary lookup key as the server serial number. Setting the primary lookup key as the server serial number has two benefits:

- It enables servers to be imported by their serial number, rather than keys that are more difficult to determine, such as the MAC address.
- It prevents duplicate database entries from occurring when servers have two or more NICs.

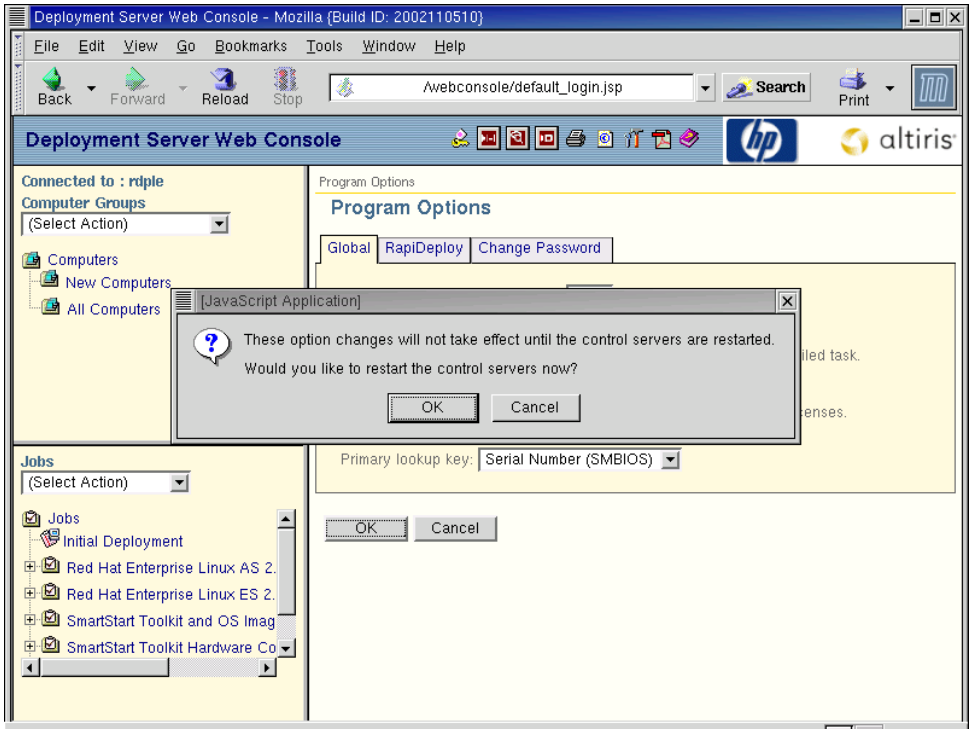
To change the primary lookup key to the server serial number:

1. At the Web console, click the **Program Options** icon in the toolbar. The **Program Options** information displays in the **Details** pane.
2. Select the **Global** tab.
3. From the Primary lookup key list, select **Serial Number (SMBIOS).**



4. Click **OK.**

5. Click **OK** when prompted to restart the control servers.



Configuring ProLiant BL Server Enclosures

The **Physical Devices** view in the Web console displays the physical relationship among the racks, enclosures, and blade servers using the rack name and enclosure name for each ProLiant BL server. The default name for the server rack is “UnnamedRack” and the default name for the BL e-Class server enclosure is the MAC address of the NIC associated with the Integrated Administrator.

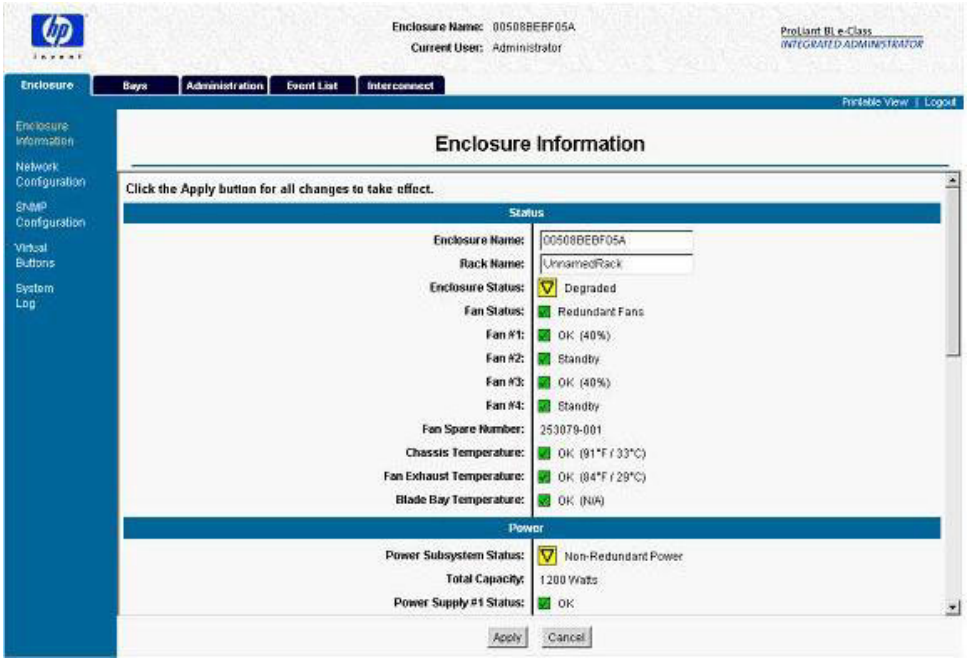
Setting the rack name and enclosure name is recommended before the first server in an enclosure connects to the Deployment Server. After ProLiant BL servers are powered up for the first time and the rack and enclosure names are recorded in the Deployment Server database, the servers must be rebooted for new rack and enclosure names to be discovered. In addition, the default-named rack and enclosure must be manually deleted from the Web console.

ProLiant BL e-Class Servers

To change the rack and enclosure names if the Integrated Administrator port is connected to a network with DHCP:

1. Browse to the DNS name located on the tag attached to the interconnect tray on the enclosure.
2. Log in to the Integrated Administrator using the user name and password located on the tag.
3. At the Enclosure Information screen, change the **Enclosure Name** and **Rack Name,** and then click **Apply.**

IMPORTANT: Do not use the same enclosure name for multiple enclosures. Using the same enclosure name will result in multiple blade servers being displayed in each bay for an enclosure and duplicate default server names.



If the Integrated Administrator port is not connected to a network with DHCP, refer to the documentation shipped with the product for details concerning how to access the Integrated Administrator using other methods, such as the serial console.

After configuring the enclosure, install the ProLiant BL e-Class servers into the enclosure by following the instructions provided with the server hardware.

For more information regarding ProLiant BL e-Class servers, refer to the documentation shipped with the product.

ProLiant BL p-Class Servers

To configure all racks and the ProLiant p-Class enclosure properly, at least one blade server must be placed in each enclosure. The blade server should not be powered on until the desired rack and enclosure names are set using the iLO interface. Otherwise, the blade server will boot to PXE (if enabled) and the default rack and enclosure name will be placed in the Deployment Server database.

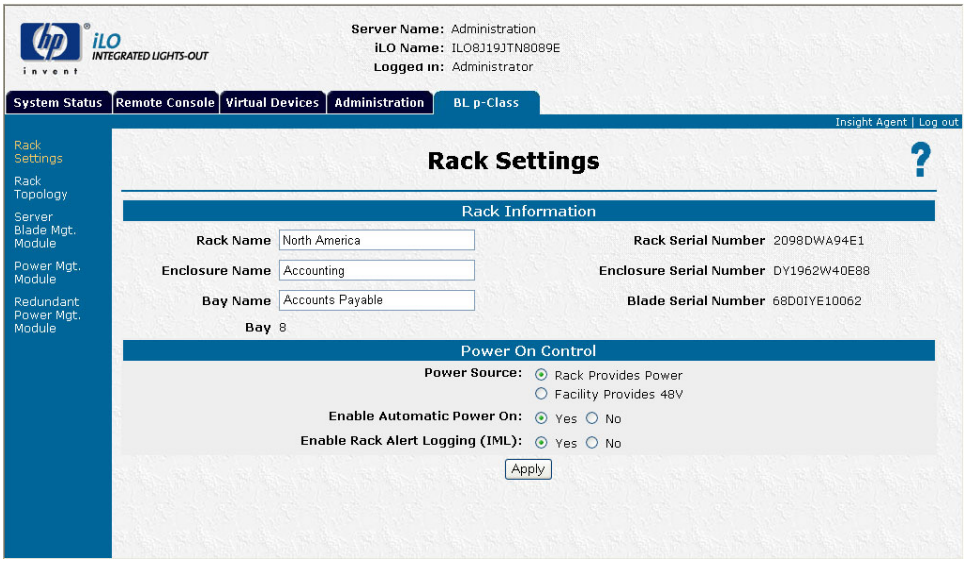
After ProLiant BL servers are powered up for the first time and the rack and enclosure names are recorded in the Deployment Server database, the servers must be rebooted for new rack and enclosure names to be discovered. In addition, the default named enclosure and rack must be manually deleted from the Web console.

To change the rack and enclosure names if the iLO port is connected to the network with DHCP services available:

1. Browse to the DNS name located on the tag attached to the ProLiant BL p-Class server.
2. Log on to iLO using the credentials on the tag.

NOTE: Users that do not have the Administrator ProLiant BL p-Class privilege will only be able to view the settings.

3. Select the **BL p-Class** tab.
4. At the Rack Settings screen, change the **Rack Name** and **Enclosure Name.**



IMPORTANT: Do not use the same enclosure name for multiple enclosures. Using the same enclosure name will result in multiple blade servers being displayed in each bay for an enclosure and duplicate default server names.

5. Click **Apply.**
6. After the parameter changes have been made, click **Apply** to complete the changes.
7. Log out, and log back on to iLO.

For more information regarding iLO, refer to the documentation shipped with the product.

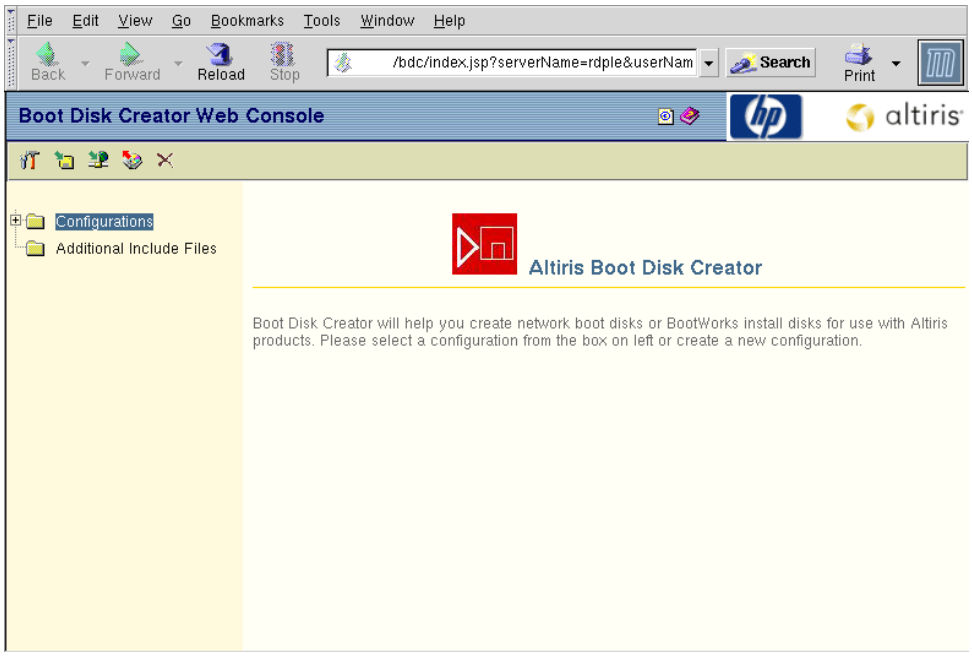
If the iLO port is not connected to a network with DHCP services available, refer to the documentation provided with your blade server for details about accessing iLO from the front panel of the blade server.

Creating Physical Boot Diskettes for Server Deployment

If PXE will not be used in the deployment infrastructure, one or more physical boot diskettes must be created. These diskettes enable target servers to communicate with the Deployment Server.

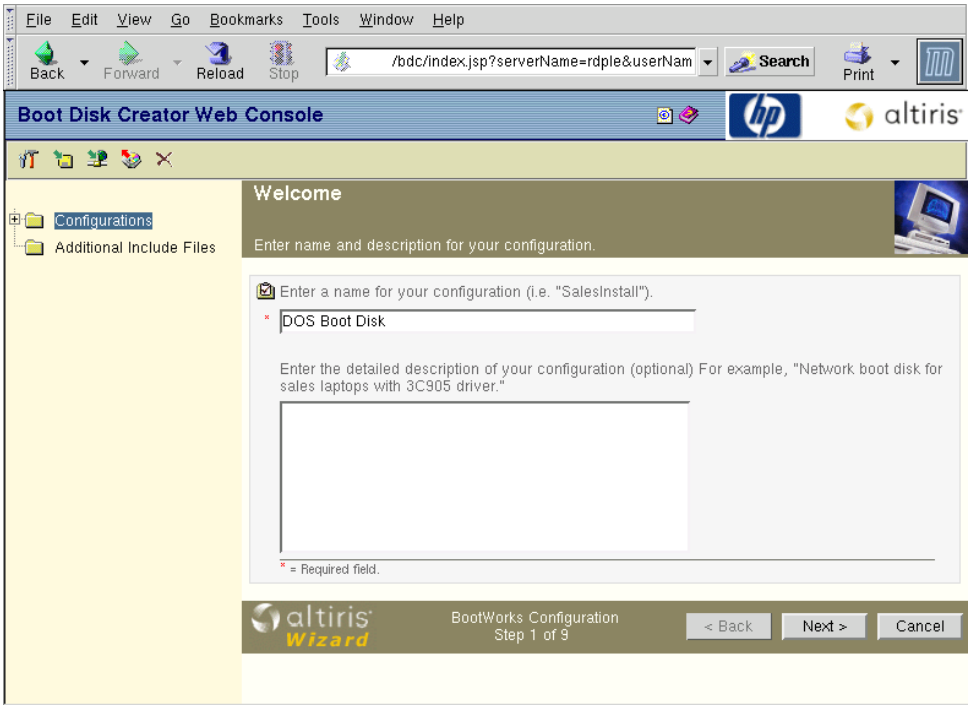
To create a DR-DOS boot diskette using the **Boot Disk Creator** within Altiris:

1. At the Web console toolbar, click the **Boot Disk Creator** icon. The Boot Disk Creator Web console opens.



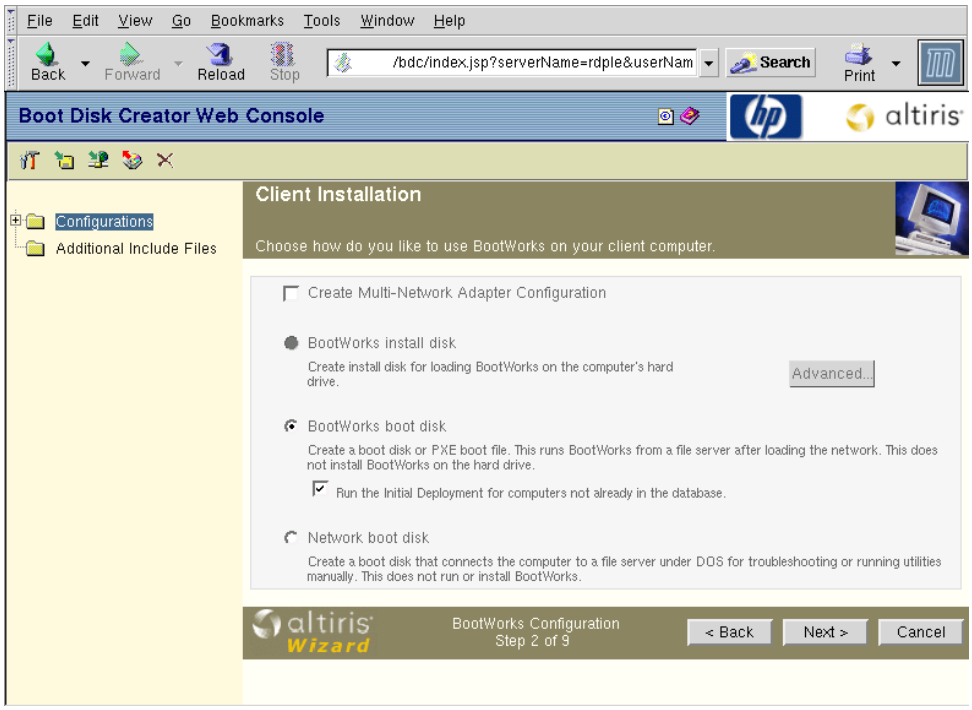
2. Click the **Create a New Configuration** icon in the Boot Disk Creator Web Console tool bar.

3. In the Details pane, enter a name for the configuration, such as **DOS Boot Disk,** and a description, then click **Next.**



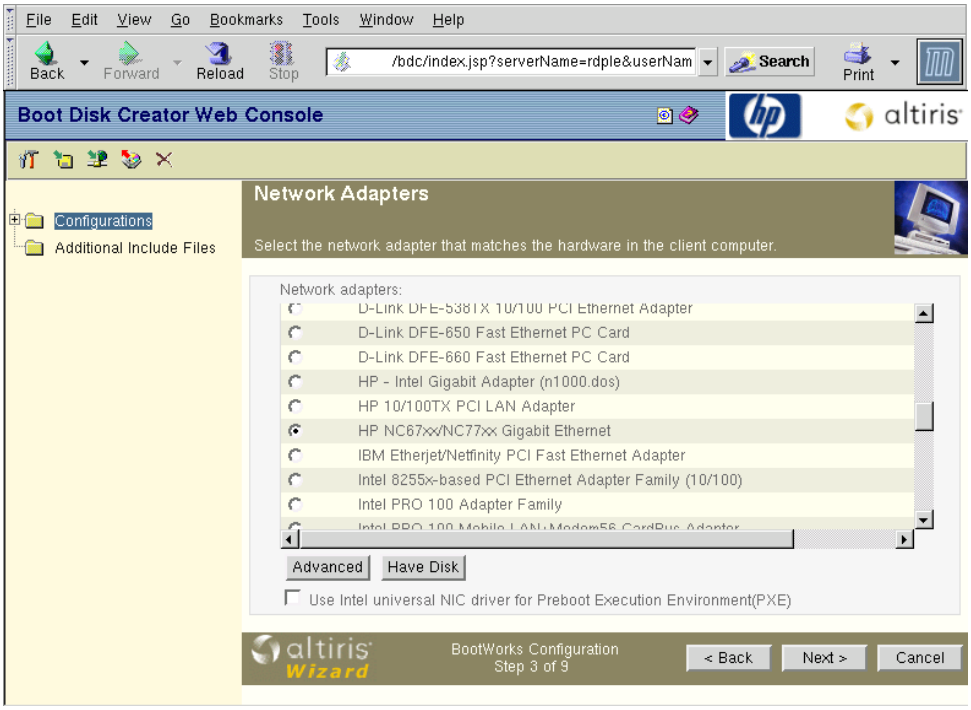
4. Select **Bootworks boot disk** from the available choices. Select **Run the Initial Deployment for computers not already in the database,** and click **Next.**

   NOTE: The Initial Deployment selection can be used on boot diskettes even when the computer is a managed computer, and Initial Deployment will only run the first time a computer displays in the Deployment Server.

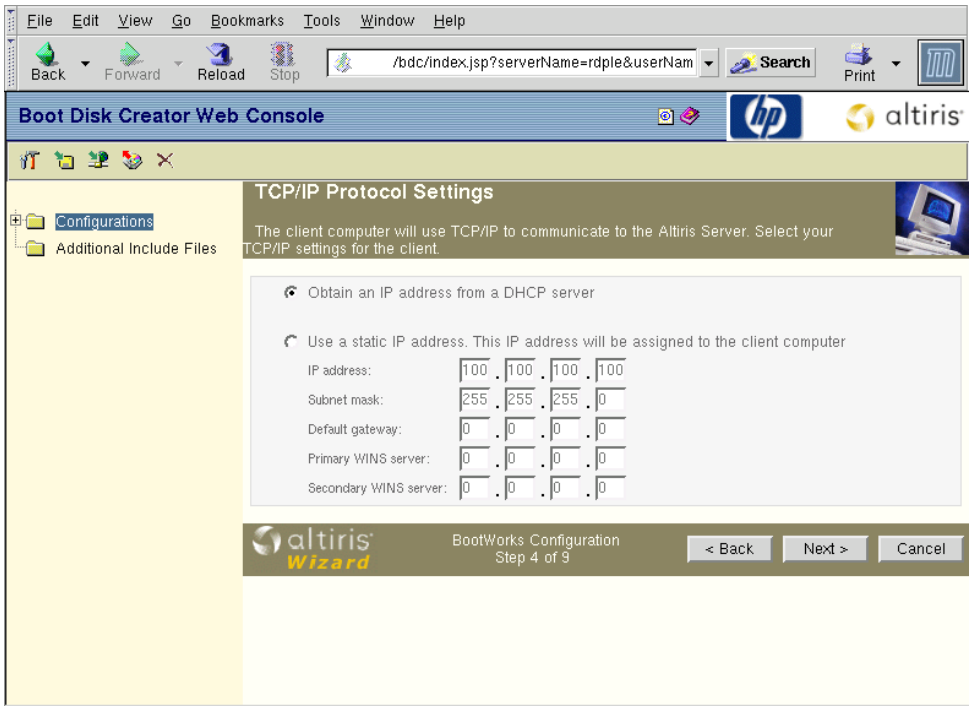


5. Select the appropriate driver for the target server NIC.
   - For Intel-based Gigabit NICs, select **HP –Intel Gigabit Adapter (n1000 .dos).**
   - For Intel 10/100 NICs, select **HP 10/100TX PCI LAN Adapter.**
   - For Broadcom-based NICs, select **HP NC67xx/NC77xx Gigabit Ethernet.**

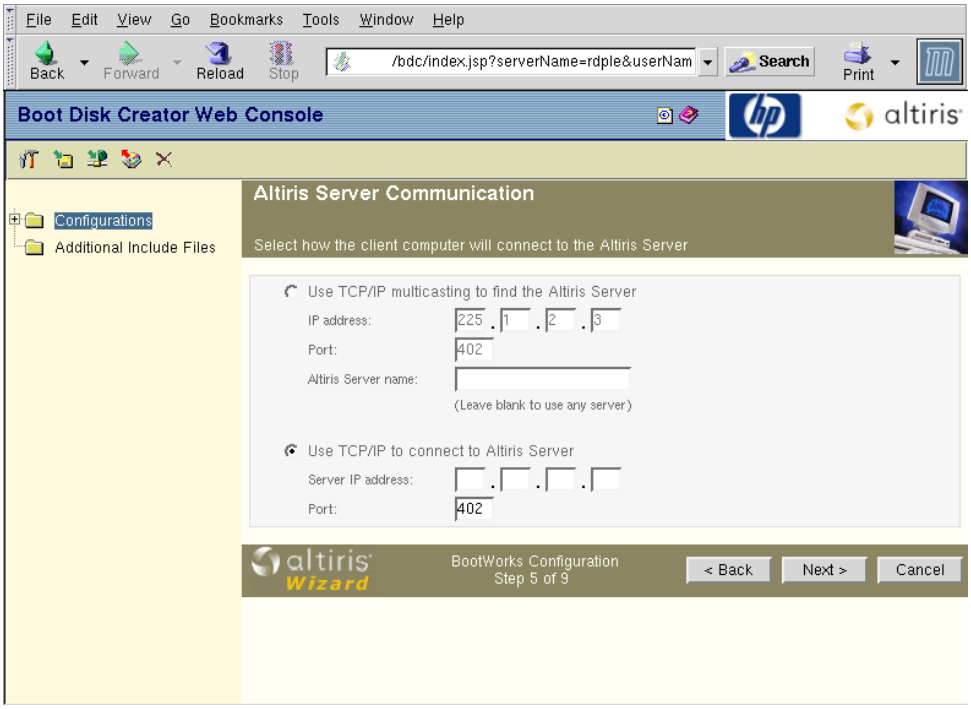
   Verify **Use Intel universal NIC driver for Preboot Execution Environment (PXE)** is not selected. Click **Next.**



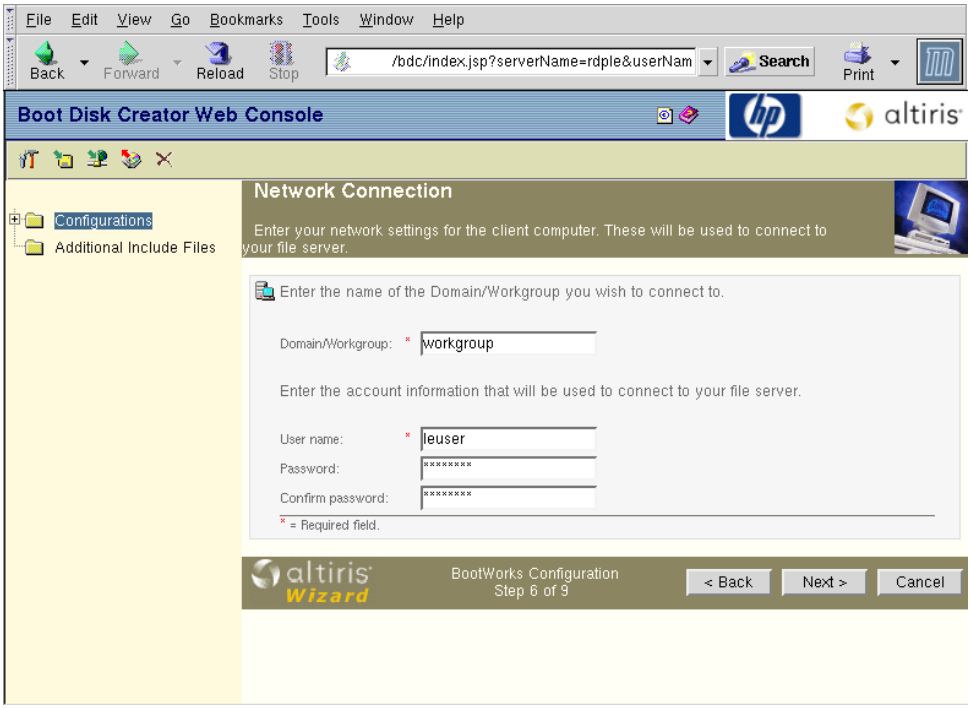
6. If static IP addresses are required, insert the appropriate information here. Click **Next** to accept the IP settings.



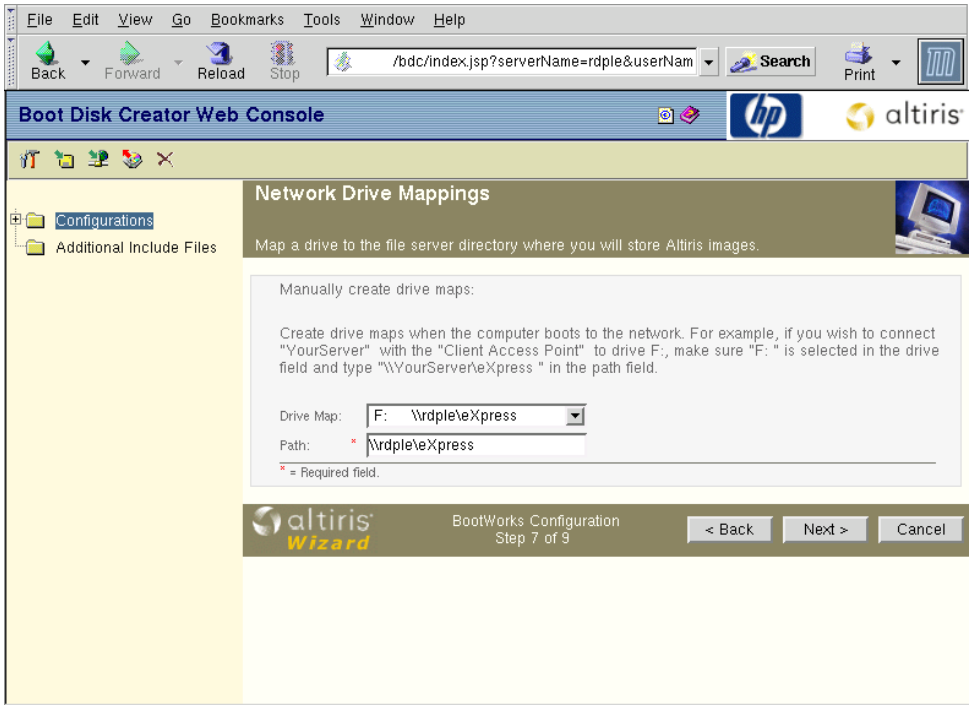
7. In the Use TCP/IP to connect to Altiris Server field, verify the Server IP address reflects the IP address of your Deployment Server. Click **Next.**



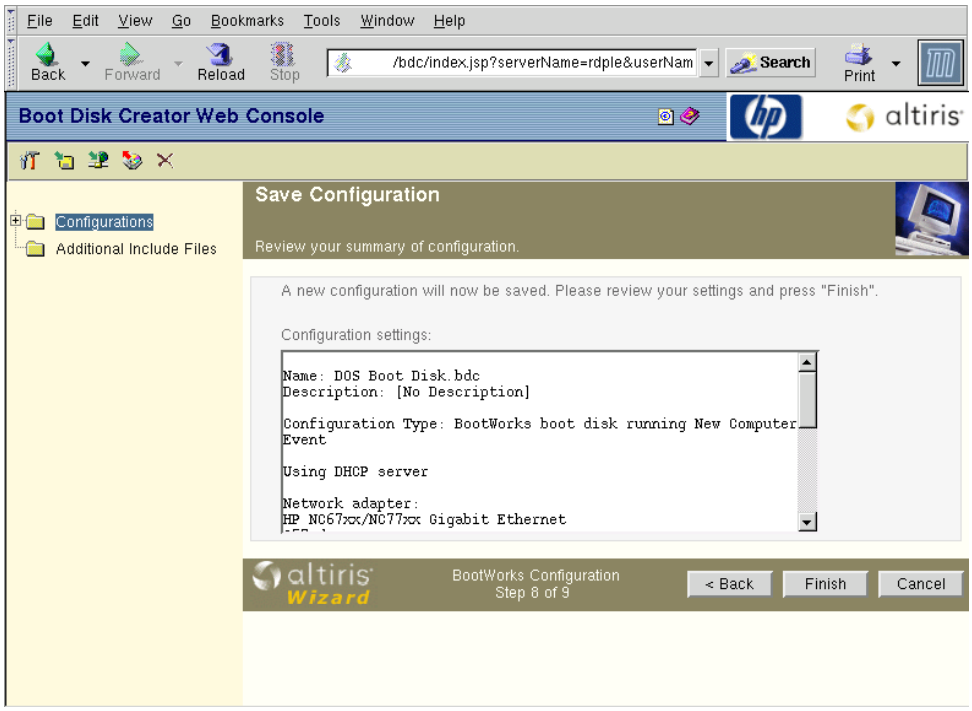
8. Click **Next** to accept the default workgroup name and login account settings.



9. Click **Next** to accept the default drive mappings settings.

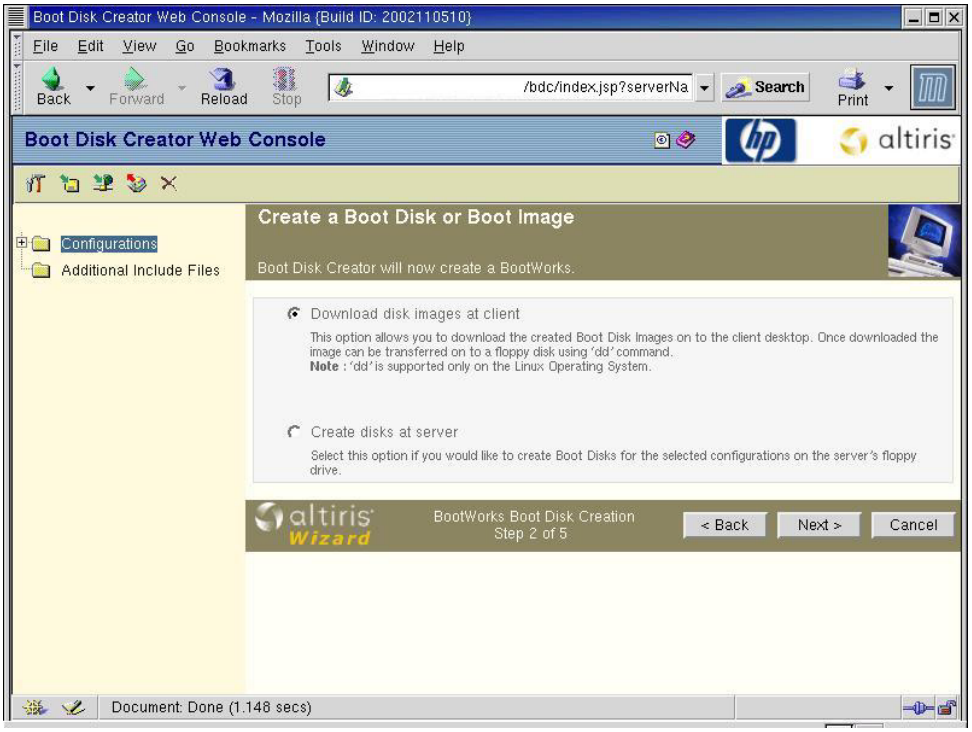


10. Click **Finish** to create the configuration.



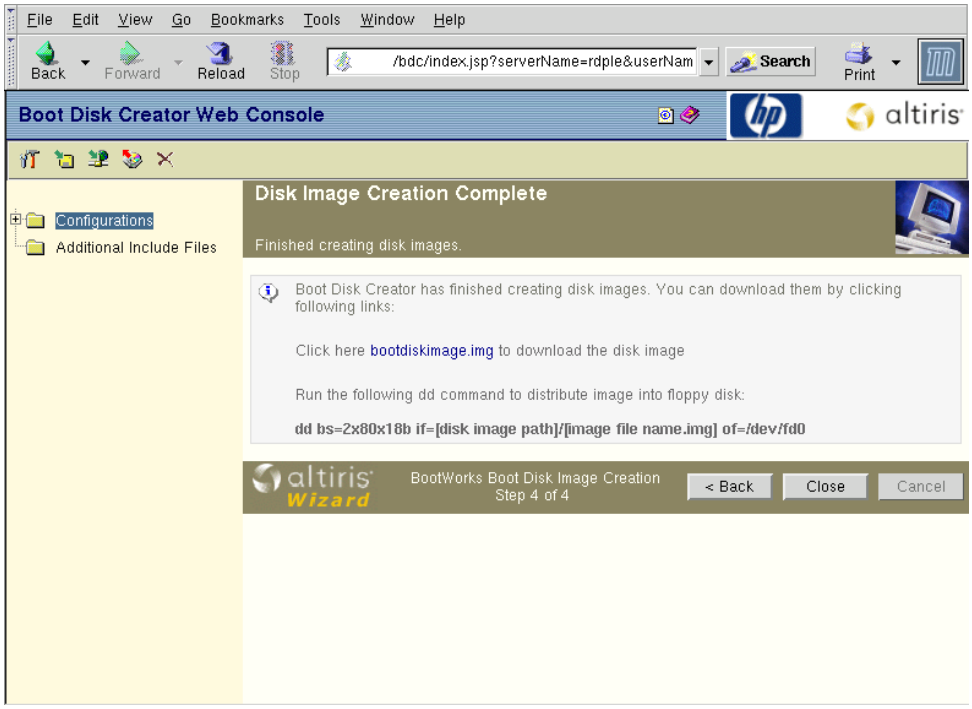
11. Click **Close.**

12. From the Boot Disk Creator Web Console toolbar, click the **Create Disks** icon. The Details pane displays the Choose Configuration selections.
13. Select the newly created configuration ("DOS Boot Disk" in this example) and click **Next.**
14. Select **Download disk images at client** and click **Next.**



15. Click the boot disk image link (bootdiskimage.img) referred to in the **Disk Image Creation Complete** instructions and follow the on-screen instructions. Note the additional instructions to convert the file while copying the image onto a floppy diskette.

    Boot Disk Creator uses the same image file name of bootdiskimage.img. If you are saving multiple configurations, use different names when saving to your drive.



16. When the image is saved to the drive, click **Close.**
17. At a Linux prompt, duplicate the image onto a floppy using the instructions from step 16 that were displayed in the Disk Image Creation Complete window.

5

Pre-Deployment Configuration for Linux Scripted Installs

Overview

This chapter describes required modifications that must be performed before using any Linux scripted install jobs.

The following topics are covered in this chapter:

- Preconfiguring the ProLiant Support Pack for Linux
- Preconfiguring deployment settings for Red Hat Linux scripted install jobs
- Preconfiguring deployment settings for UnitedLinux scripted install jobs

Preconfiguring the ProLiant Support Pack for Linux

The Web-based Management portion of the Foundation Agents requires that a password be configured before installation. This password is also used by several other components in the ProLiant support software. Without the password, the Web-based Management portion of the Foundation Agents will install but will not function correctly or be accessible on your deployed servers.

Support software directories and scripts associated with each Linux operating system are located on the NFS server. These files are located at /usr/cpqrdp/ss.*xxx*/*yyyy*/csp, where *xxx* is the ProLiant Support Pack version and *yyyy* is the Linux distribution shortcut name, such as rhas21 for Red Hat Enterprise Linux AS 2.1. A support software script, yyyy.sh, is used to install the ProLiant support software, and within this script are the password variables for the Linux Web Agent.

Additionally, SNMP settings are configured in this script.

The Linux Web Agent default passwords are listed in Table 5-1.

Table 5-1: Linux Web Agent Default Passwords

User Name	Password
administrator	`password`
operator	`password`
user	`password`

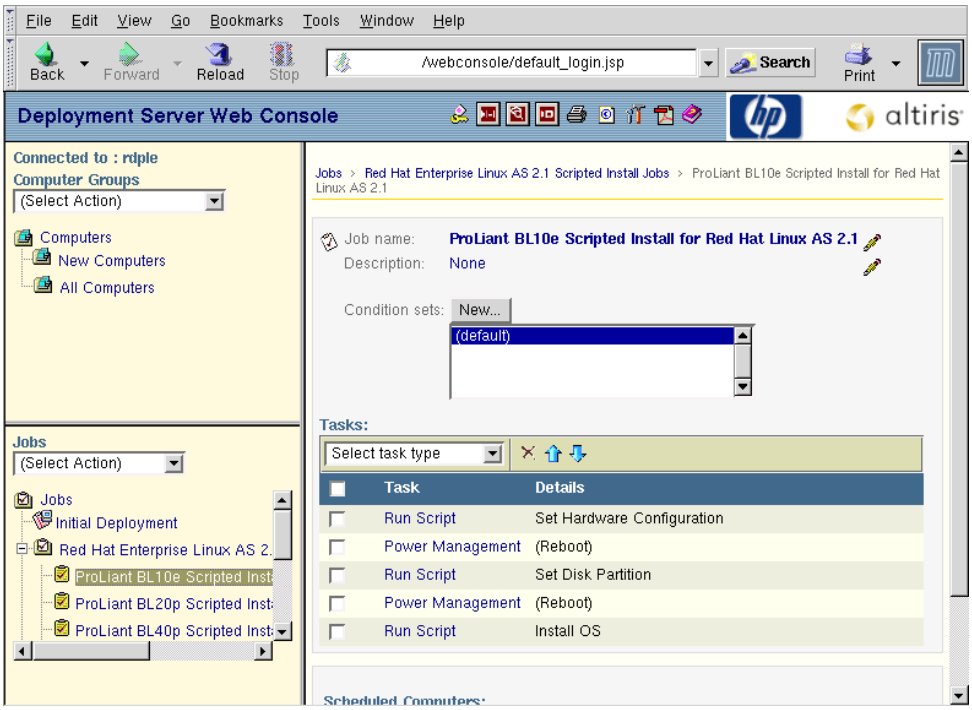
Because the default passwords are documented here, HP recommends changing the passwords either by editing the support software script as previously described or by browsing to the installed server, port 2301 or secured port 2381, and changing the password. Changing the password by editing the support software script before a scripted install means these passwords can be mass deployed to target servers. Additionally, after the scripted install, modified passwords can be replicated to other servers by copying the /var/spool/compaq/wbem/cpqhmmd.acl file to other servers.

Preconfiguring Deployment Settings for Red Hat Linux Scripted Install Jobs

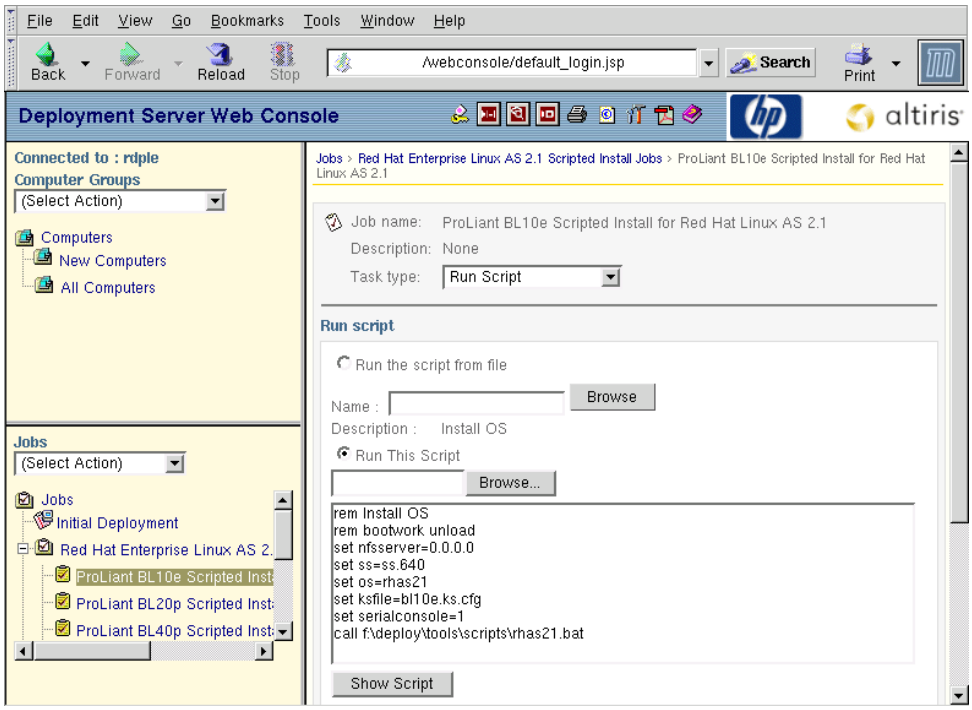
For the Red Hat Linux scripted install jobs to work, they must be modified with the host and domain name or IP address of the NFS server on which the installation files are located.

To update each Red Hat Linux scripted install job to point to the NFS server:

1. Locate the Red Hat Linux scripted install jobs to be modified within the Web console. Expand the tree view, if necessary, to view the jobs in the Jobs pane.
2. Click the job to highlight it. The job properties information displays in the Details pane.



3. Click the last **Run Script** link of the Install OS – Run Script task. The run script properties information displays in the Details pane.



4. Locate the following line in the script:

   ```
   set nfsserver=0.0.0.0
   ```

5. Change 0.0.0.0 to the host and domain name of the NFS server as follows:

   ```
   set nfsserver=yournfssvr.yourdomain
   ```

   where *yournfssvr* is the host name of the NFS server, and *yourdomain* is the domain name for the NFS server.

   Instead of a host name and domain name, an IP address can be specified as follows:

   ```
   set nfsserver=xxx.xxx.xxx.xxx
   ```

   where *xxx.xxx.xxx.xxx* is the fixed IP address of the NFS server.

   NOTE: Using the IP address to connect to the NFS server is more effective than using a DNS name, since using a DNS name requires the existence of a DNS server properly configured with an entry for the NFS server.

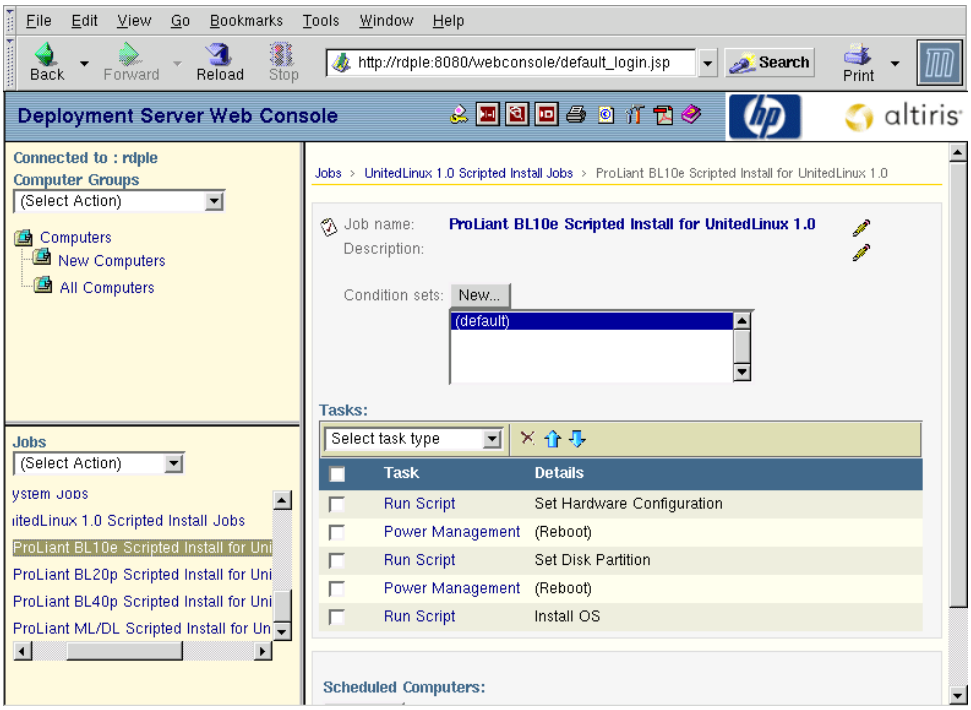
6. Click **Apply** to save changes.
7. Repeat steps 2 through 6 for any remaining Red Hat Linux scripted install jobs.

Preconfiguring Deployment Settings for UnitedLinux Scripted Install Jobs

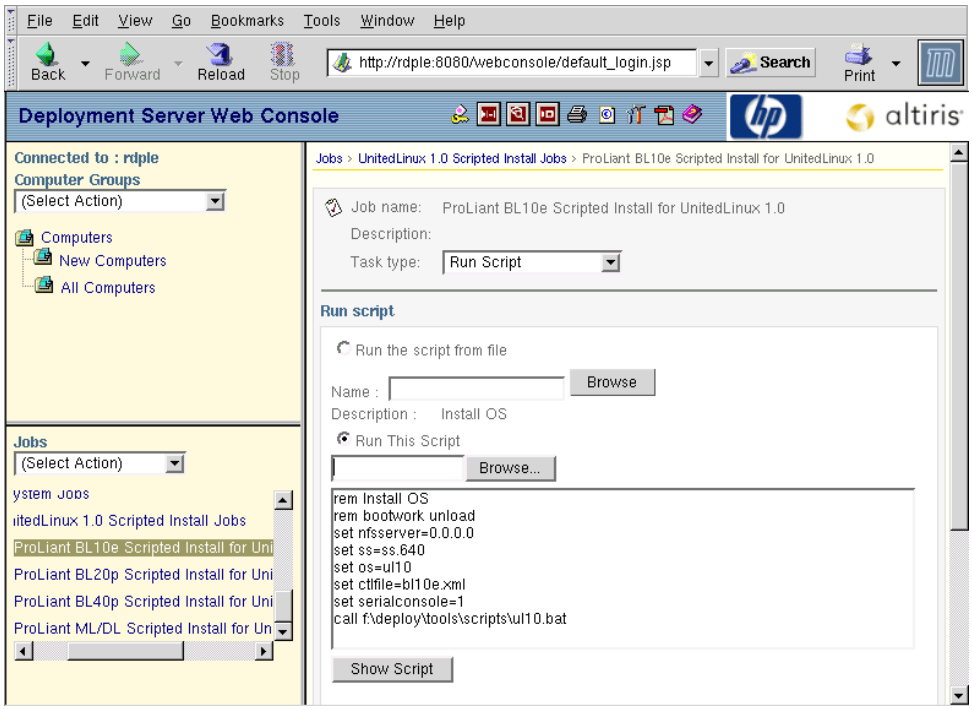
For the UnitedLinux scripted install jobs to work properly, they must be modified with the host and domain name or IP address of the NFS server where the installation files are located.

To update each UnitedLinux scripted install job to point to the NFS server:

1. Locate the UnitedLinux scripted install jobs to be modified within the Deployment Server Console. Expand the tree view, if necessary, to view the jobs in the Jobs pane.
2. Click the job to highlight it. The job properties information displays in the Details pane.



3. Click the last **Run Script** link of the Install OS – Run Script task. The run script properties information displays in the Details pane.



4. Locate the following line in the script:

   ```
   set nfsserver=0.0.0.0
   ```

5. Change `0.0.0.0` to the host and domain name of the NFS server as follows:

   ```
   set nfsserver=yournfssvr.yourdomain
   ```

   where *yournfssvr* is the host name of the NFS server, and *yourdomain* is the domain name of the NFS server.

   Instead of a host name and domain name, an IP address can be specified as follows:

   ```
   set nfsserver=xxx.xxx.xxx.xxx
   ```

   where *xxx.xxx.xxx.xxx* is the fixed IP address of the NFS server.

Using the IP address to connect to the NFS server is more effective than using a DNS name, since using a DNS name requires the existence of a DNS server properly configured with an entry for the NFS server.

6. Click **Apply** to save changes.
7. Repeat steps 2 through 6 for any remaining UnitedLinux scripted install jobs.

A

Manually Installing Red Hat Enterprise Linux Boot Files

If you chose to not copy the Red Hat Enterprise Linux boot files during installation, then you must manually copy those files for each distribution skipped for the Red Hat Enterprise Linux provided jobs to work.

NOTE: Linux boot files for all other Linux distributions are provided on the Rapid Deployment Pack CD and installed during the ProLiant Integration Module for Linux Deployment Server installation.

To manually copy the Red Hat Enterprise Linux boot files to the Deployment Server directory:

1. Locate the /opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.*xxx/yyyy* directory on the Deployment Server, where *xxx* is the ProLiant Support Pack version and *yyyy* is the Linux distribution shortcut name for the distribution you skipped.

Linux Distribution	Distribution Shortcut Name
Red Hat Enterprise Linux AS 2.1	rhas21
Red Hat Enterprise Linux ES 2.1	rhes21

IMPORTANT: The copied boot files must match the distribution version copied during the "ProLiant Integration Module for NFS Server" installation or during the "Manually Installing Linux Distribution CDs."

2. Insert the first distribution CD into the Deployment Server CD-ROM drive.
3. Mount the CD-ROM drive:

   `mount /mnt/cdrom` (Red Hat)

   `or`

   `mount /media/cdrom` (UnitedLinux)

4. Copy the following files into the Deployment Server directory from Red Hat Linux CD #1 as shown in Table A-1.

Table A-1: File Sources and Destinations

Source	Destination
/dosutils/loadlin.exe	/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.*xxx*/y*yyy*/dosutils/loadlin.exe
/images/pxeboot/vmlinuz	/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.*xxx*/y*yyy*/dosutils/autoboot/vmlinuz
/images/pxeboot/initrd-everything.img	/opt/altiris/deployment/adlserver/deploy/cds/compaq/ss.*xxx*/y*yyy*/dosutils/autoboot/initrd.img

NOTE: Rename the copied initrd-everything.img file to initrd.img.

5. Unmount the CD-ROM drive:

   `umount /mnt/cdrom` (Red Hat)

   or

   `umount /media/cdrom` (UnitedLinux)

B

Manually Installing Linux Distribution CDs

If you chose to not copy the Linux distribution CDs during installation, then you must manually copy those Linux files for each distribution skipped for the provided jobs corresponding to the Linux version to work.

To manually copy a set of Linux distribution CDs to the NFS server directory:

1. Locate the /usr/cpqrdp/*yyyy* directory on the NFS server, where *yyyy* is the Linux distribution shortcut name for the distribution you skipped.

Linux Distribution	Distribution Shortcut name
Red Hat Enterprise Linux AS 2.1	rhas21
Red Hat Enterprise Linux ES 2.1	rhes21
Red Hat 7.2	rh72
Red Hat 7.3	rh73
Red Hat 8.0 Professional	rh80

IMPORTANT: The copied Red Hat Enterprise Linux distribution files must match the boot files version copied during the "ProLiant Integration Module for Linux Deployment Server" installation or during "Manually Installing Red Hat Enterprise Linux Boot Files."

2. Insert the first distribution CD into the NFS server CD-ROM drive.
3. Mount the CD-ROM drive:

   `mount /mnt/cdrom` (Red Hat)

   or

   `mount /media/cdrom` (UnitedLinux)

4. Copy the contents of the distribution CD, including subdirectories, to the distribution directory. For example:

   ```
   cp -r  /mnt/cdrom/* /usr/cpqrdp/rhas21
   ```

5. Unmount the CD-ROM drive:

   `umount /mnt/cdrom` (Red Hat)

   or

   `umount /media/cdrom` (UnitedLinux)

6. Repeat steps 3 through 5 to copy the remaining CDs in the distribution set. The distribution CDs containing the RedHat/RPMS directory is required. However, not all distribution CDs in the set might be needed.

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